Every day Dahe dug a pit to take samples of ice, which would later be analyzed for signs of pollution. Also as part of the scientific component of the expedition, Victor recorded weather data and ozone measurements. Jean-Louis took weekly samples for urinalysis and administered psychological tests. These were requested by the European Space Agency, in anticipation of their own planned international space team. (On the 135-foot research vessel UAP that we had had built and that followed us by sea around Antarctica, more scientific experiments were conducted by two Saudi oceanographers.)

At noon on Monday, December 11, we spotted a speck in the sky. The speck became a large cargo plane, making a low, angled landing at the Pole. The base was still below our horizon, but the plane touched down precisely on the bearing toward which Victor was skiing. We were right on target.

Antennas appeared first, then the geodesic dome of the U.S. Amundsen-Scott Station. From across the base runway we spotted the Pole itself—a barber's pole topped by a mirrored ball. Around it was planted a semicircle of flags flapping in the wind, and what looked like a long row of red fuel drums.

They turned out to be people: base personnel waiting to greet us in 20 below temperatures. In the crowd of 60 or so a big red sign read "Hello from Minnesota," my home. The dogs raced straight for it....

So far the mileage wheel on our sled had logged 2,071 miles, more than most previous Antarctic expeditions in their entirety....We rested for three days and were off.

As we entered the area of inaccessibility, we began to climb to our highest elevation—11,400 feet. Here dizzy spells and shortness of breath made pushing sleds and wrestling with tents Herculean labors. Here too we encountered fields of sastrugi—ocean-like waves of frozen ice that made sledding difficult and skiing near impossible. Each of us fell scores of times every day...

As we climbed, the air thinned, and we had to be even more cautious about ultraviolet rays. Dahe traveled one four-hour stretch without a face mask, and the sun etched bright burns across his cheeks. No amount of sun-block cream would do, only protective covering....

We had been warned by both French and Soviet scientists that there would be very deep snow throughout the area of inaccessibility. The scientists had assured us that we would not be able to cross it by dog team. To our surprise it turned out that surfaces had been hard packed by the wind, making for relatively easy sledding.

Along our 800-mile route across that wasteland we counted on planes to resupply us twice, thanks in large part to the Soviet Antarctic Expedition, which provided an emergency ration of airplane fuel. The danger was that we were traveling on a very tight margin. If the plane had mechanical problems or failed to find us, we would be in big trouble.

The area was inaccessible in more ways than one. In addition to storms in the region, sunspots were approaching the peak of their 11-year cycle, making radio contact almost impossible. Once again we found ourselves beyond the range of modern technology.

To help pilots track us, we built five-foot cairns that cast long shadows on this featureless plain every two miles. Each cairn took five minutes and helped relieve the monotony that dominated our days....

But the real challenge was how to occupy our minds. Day after day, week after week, our routine was the same, the surroundings identical. Monotony and boredom drained us.

I spent my days designing solar houses, plotting expeditions to come, and trying to recapture sensory impressions so absent from this bare white world: the night sounds of summer, the smells of a forest, the touch of a morning sun in May. I dug deep into my mental file cabinet for such ordinary moments; here they were like precious jewels.

Jean-Louis imagined working at a different job each day—today a mine worker, tomorrow President of France. Dahe said he re-created his entire life—all his family, friends, places he had lived and visited—as we crossed the area of inaccessibility. Keizo thought about Japan, his home, and his girlfriend, and tried to sing. Geoff, ever orderly and businesslike, calculated and recalculated the miles left to go and the food required for men and dogs.

We arrived at Vostok January 18, the first to cross the area of inaccessibility on foot. We were greeted by fireworks and the 40 Soviets who work there....

Vostok is close to the coldest spot in the world, where an incredible minus 128.6°F was recorded in 1983. The morning we arrived, it was 48 below and dropping fast. I knew it would only get colder until we neared the coast, 850 miles away. Indeed, on February 6 we recorded our coldest day—54 below—and on the 15th, the worst windchill, minus 125. Windstorms like those on the peninsula swept us again, though thankfully they were now at our backs....

Soviet tractors were resupplying us now, leaving caches of food as they plied the route between Vostok and Mirnyy. The cold worsened. Though nearing the end of our trek, we could not afford to get cocky. Both Victor and Dahe had been lost in Antarctic storms in the past and were lucky to have survived. Dahe recalled an incident when a scientist had stepped out to record weather data, gotten confused in whiteout conditions, and froze to death between two buildings just 50 yards apart.

As we dropped through the storm belt and drew closer to Mirnyy, it grew warmer.... we saw our first real bird in nearly seven months—a skua—and talked about it for days. The temperature climbed to zero for the first time since August.

Two days out of Mirnyy the storms came back with a vengeance. As always in such conditions, we staked skis and poles every few yards between the tents. It was here that Keizo, looking after his dogs in the blizzard, lost his way between ski markers and had to bury himself to survive.... Finding Keizo alive was the greatest relief I have ever known.

The storms calmed the next day, and on March 3, 1990—after 220 days and 3,741 miles—we arrived at the other side of the continent.

When we pulled into Mirnyy, we were ecstatic, swept by a feeling of inexpressible joy. The Soviets gave us a rousing hometown welcome, complete with a finish line. More than a hundred people had gathered to greet us...

We sat around the table as the Soviets toasted our success, and I surveyed my teammates. We had emerged from the interior of Antarctica with our friendship not merely intact but deep and mature. This bond of true affection, woven in mutual hardship, had strengthened all of us. It had pulled us—six very different men from six very different countries—across this frozen land. Perhaps that was our biggest success; we proved in the end that we weren't very different after all....

Perhaps our expedition—as a small example of multinational effort focused on the last great frontier—would be accepted as a contribution toward the world's new awakening.

IV. STUDYING GLOBAL ISSUES AND PROBLEMS

Students who will live their adult lives in the 21st century must understand the global issues we face if they are to function as effective citizens. The first activity identifies a variety of global and local issues and helps students clarify how they themselves and others in their community view these issues. The remaining activities deal with issues in the four categories identified by Willard Kniep: environmental problems (Activity 17—biodiversity), peace and security issues (Activity 18—democracy vs. tyranny), human rights issues (Activity 19—refugees), and issues of national/international development (Activity 19—population and poverty, Activity 20—sustainable development).

16. GLOBAL AND LOCAL ISSUES: A SURVEY

Introduction:

As future decision-makers, students will have to deal with many local and global problems. Even as teenagers, students have the capacity to affect both local and global issues. Learning about and understanding public sentiment regarding such issues can help students put their own values into perspective.

In this lesson, students survey other students, teachers, family members, and members of the community to determine how important they think various issues are. The class then tallies the results of the survey to determine the overall priorities of the people surveyed. They discuss why these priorities are similar to or different from their own priorities.

Objectives: Students will be able to:

1. List at least 15 local and/or global issues.
2. Recognize how these issues affect them personally.
3. Gather information through a survey.
4. Evaluate the results of the survey.

Time Required: 2 class periods over 3 or 4 days

Materials and Preparation: Make enough copies of Handout 16-1 for each student to have three copies. Prepare a list of all the issues on the handout on the chalkboard or on poster paper. This will be used in tallying the survey responses.

Procedure:

1. Give each student three copies of Handout 16-1. Ask students to complete their own surveys individually.

2. Tell students that analyzing their responses to the survey would give an accurate picture of the class's views on the importance of these issues. Would it give a good picture of the general public's views? Why or why not? How could students improve their ability to draw conclusions about the general public's views?

3. Tell students that as a homework assignment, they are to find two other individuals to complete the survey. Before students begin the survey, you may want to inform them of a few basic rules of survey etiquette: (1) they should explain that they are taking a brief poll about people's opinions on local and global issues, (2) they should ask if the person has time to complete the survey, and (3) they should thank the person when they are finished.

Activity developed by Janice V. Pearson.

4. Allow students two or three days to complete this task. On the day the homework is due, have students report their own responses as well as the responses from the other participants. As students report, tally the responses on the chalkboard or poster paper list.

5. Review the rankings. Using only the responses in the "Major Problem" category, rank order each item. Have students rank order those issues they personally rated as "Major Problems." Discuss how the overall rankings are similar to or different from their own rankings. Ask students to suggest reasons for differences.

6. Next, look at the global issues and the local issues: Ask students:

- What differentiates the two categories? Do global issues have local effects? Do local issues have global effects?
- How can students personally affect local issues?
- How can students personally affect global issues?
- Since not all who completed the survey ranked the same items as major problems, what does this tell us about individual values and concerns?

7. Ask each student to determine the one issue on the list he/she feels is most important. Then ask students to write a paragraph or two on why this issue was ranked number one and how the student feels he/she could help solve this problem. Students should be graded on how well they defend their choices.

Follow-up:

Choose four or five items that are ranked as "Major Problems" by the majority and have teams of students research and report on the issues.

GLOBAL AND LOCAL ISSUES

	Major Problem	Minor Problem	Not a Problem
1. Crime in my community			
2. World population growth			
3. Unemployment in my community			
4. Air pollution			
5. Public transportation			
6. World hunger			
7. Day care for children			
8. Quality of education			
9. Inflation			
10. Threat of nuclear war			
11. Adequate housing			
12. Adequate police protection			
13. Heath care costs			

	Major Problem	Minor Problem	Not a Problem
14. Care for the elderly			
15. Worldwide availability of potable water			
16. Land use			
17. Nuclear reactors			
18. Recreational facilities			
19. Hazardous substances (toxic chemicals, waste dumps)			
20. Extinction of plants and animals			
21. Water pollution			
22. Energy shortages			
23. Human health and disease			
24. Litter			

17. BIODIVERSITY

Introduction:

Tourists visiting the National Zoo in Washington, DC, stare in fascination at the giant pandas contentedly munching bamboo branches. It's easy to become emotionally involved at the thought of this lovable species becoming extinct, and pandas have many advocates. But no one knows or cares about tiny insects on the floor of tropical forests as they become extinct. Every day, around the globe, species are lost; others are sentenced to extinction. The earth's biological diversity is more threatened today than at any other time in the past 65 million years. This lesson examines the importance of biodiversity, looks at why it is threatened, and suggests ways of conserving biodiversity.

The lesson begins with a case study highlighting a Costa Rican program to catalog the country's biodiversity. The symptoms of biodiversity loss are identified, as well as underlying causes. After a consideration of why we should be concerned about biodiversity loss, the lesson concludes with strategies to conserve biodiversity.

Objectives: Students will be able to:

1. Define *biodiversity* and give examples.
2. List ways in which biodiversity is threatened.
3. Distinguish between immediate causes and root cause of biodiversity loss.
4. Communicate reasons why biodiversity is valuable and should be preserved.
5. Identify actions they can take to help preserve biodiversity.

Time Required: 2 class periods

Materials and Preparation: Make copies of Handouts 17-1, 17-2, 17-3, and 17-4 for all students. Use the masters provided to make transparencies. You will also need an overhead projector and a large map of the Western Hemisphere. Before beginning this lesson, you might want to have students research some of the extinct birds and animals and the causes for extinction. An excellent source is David Day's *Vanished Species* (New York: Gallery Books, 1989).

Procedure:

1. Distribute copies of Handout 17-2. Explain that this exercise is designed as a pretest, to measure what students know before studying the topic. Allow time for students to complete the exercise (about 10 minutes).

Adapted from Lesson 4, "Biodiversity," *Teacher's Guide to World Resources 1992-93* (Washington, DC: World Resources Institute, 1992), pp. 69-86.

Tell students they can change their answers later if they want to. After completing this lesson, students can go back to their original answers to see what they have learned. Handout 17-4 is an answer sheet.

2. Distribute copies of Handouts 17-2 and 17-3. Use a map to show the location of Costa Rica. Allow students time to read the case study. Use the following questions from Handout 17-3 to discuss the case study:

- What is biological diversity or biodiversity? (The variety among living organisms and the ecological communities they inhabit. The INBIO case study discusses one type of biodiversity, species diversity: the variety of species within a region. There are two other types: genetic diversity—the variation of genes within a species, and ecosystem diversity—differences among groups of organisms in different physical settings; these types of biodiversity are not examined in this lesson.)
- What is the purpose of this national biodiversity survey? (The purpose is to catalog on computer all species, giving information about name, location, conservation status, and potential commercial uses.)
- How do "parataxonomists" differ from taxonomists? (Taxonomists are scientists who specialize in identifying and classifying species. "Parataxonomists" are local people—farmers, ranchers, high school students, etc.—who have received special training to assist the taxonomists by doing the collecting and preliminary identification.)
- Why is the INBIO survey using "parataxonomists"? (Because there are few taxonomists and many thousands of species to collect and identify.)
- Why is Merck & Co. paying $1 million to fund the biodiversity study? (Merck has successfully developed pharmaceuticals from natural sources and is looking for potential drugs in the plant, insect, and microbe samples from the INBIO study.)
- If any medicines are developed, will this help efforts to conserve the Costa Rican forests? (Yes. Rather than harvesting the forests, Merck will synthesize the chemical compounds in the laboratory. Any money that Merck makes from selling the medicines will be shared with Costa Rica. This money—royalties—and part of Merck's initial funding will be used to conserve biological diversity in the Costa Rican National System of Conservation Areas.)
- How likely is it that this project will yield new medicines? (No one can predict the success. However, approximately one-fourth of all prescriptions dispensed in the United States are derived from plants. Three-quarters of the world's people depend on traditional medicines derived from plants. Some plants have yielded important drugs—the rosy periwinkle from Madagascar yields a substance used to treat childhood leukemia, for example. Pharmaceutical houses now have rapid, automated screening equipment that speeds up research on plants. Once a promising substance has been identified, chemists try to synthesize it in the laboratory, as is being done currently with the taxol molecule from the Pacific yew tree.)
- If you and other students were to conduct similar collecting trips in local habitats (forests, wetlands, etc.), would you be likely to find as many new species as the INBIO collectors? (No. The INBIO collectors are working in the tropical forests, which are richer in species than any other habitat. Closed tropical forests contain at least 50 percent and perhaps 90 percent of the world's species.)

3. Next, focus on loss of biodiversity—the extinction of species or loss of unique habitats and ecosystems or reduction of genetic variations with a species. Ask students to give some examples of species that have become extinct. Famous examples are the passenger pigeon and the dodo. Ask students to name animals or birds that are currently threatened with extinction: the California condor, the giant panda, the golden lion tamarin, and others. In the past, many species have become extinct. What is new today is the large numbers that are threatened and the rapid pace of extinction. Continued loss or degradation of habitats at the present rate could doom up to 15 percent of the earth's species over the next 25 years.

4. Tell students that it is extremely difficult to measure loss of biodiversity. Take one kind of biodiversity—species diversity. First of all, the total number of species is unknown. Show a transparency made from Overhead Master 17-1. The total of 10 million species is an estimate—biologists think there are between 5 million and 30 million species. Secondly, many species are tiny and inconspicuous: microbes, insects, and sea creatures. Thirdly, many species live in remote or inaccessible areas. Some species may be known by local people but have never been studied and named by scientists.

Another kind of biodiversity, the variation of genes within a species, is sometimes easier to measure, at least for species grown for food. There are some records of the loss of genetic diversity. For example, according to the U.S. Department of Agriculture, of more than 7,000 apple varieties in use between 1804 and 1904 in the United States, 86 percent have been lost; of 2,683 pear varieties, 88 percent are no longer available through seed banks.

5. Explain that one way to estimate biodiversity loss is to measure loss of specific habitats. Show a transparency made from Overhead Master 17-2. The graph shows that the United States and several other European countries have lost substantial portions of their wetlands in just 30 years. Ask: As wetlands disappear, what kinds of species are likely to be lost? (Wetlands, particularly along the coasts, are habitat for waterfowl and valuable breeding and nursery grounds for fish and shellfish.) Other habitats are threatened: islands with unique species, such as Madagascar and Hawaii; freshwater lakes; mangroves; and coral reefs. Coral reefs are habitats as biotically rich as tropical forests, but they are under severe pressure from pollution, soil erosion, and possibly global climate change.

6. The loss of forest habitat has probably received the most publicity. Show a transparency made from Overhead Master 17-3. Point out the decline of temperate forests in northern countries, and tropical forests of Southeast Asia, tropical Latin America, and central and west-central Africa. Explain that it is difficult to measure deforestation (or other forms of habitat loss) precisely. Recent studies of global deforestation are based in part on satellite images, but there are difficulties in collecting data, and all figures are estimates.

To estimate how many species are affected by loss of habitats, scientists take into account the relationships between the size of an area and the number of known species it holds. For example, a recent analysis of tropical forest habitat (which contains 50 to 90 percent of the world's species) concluded that at current rates of deforestation, 4 to 8 percent of rainforest species would be sentenced to extinction by 2015 and 17 to 35 percent by 2040. "Sentenced to extinction" means that the species is likely to lose the ability to breed and reproduce in the future. It lacks the habitat, food sources, or breeding conditions that are necessary for a viable population of the species.

7. Discuss other threats to biodiversity. They include:

- *Alteration and fragmentation of habitat.* For example, in North America, the breakup of contiguous forests has seriously harmed many populations of songbirds.
- *Overexploitation of plant and animal species.* Many species are overexploited for our food and shelter, but the search for precious commodities, such as ivory, and for pets, curiosities, and collector's items has threatened other species as well.
- *Pollution of soil, water, and atmosphere.*
- *Introduction of nonnative species.* New species can crowd out native species. For example, on Guam, the brown tree snake has caused the extinction of three of the island's five endemic bird species and has nearly eliminated the other two.
- *Industrial agriculture and forestry.* Modern plant breeding programs have led to fewer varieties of crops. In the Green Revolution, farmers abandoned traditional varieties of crops in favor of higher-yielding new varieties. A tree plantation that consists of one species of tree is very different from a diverse forest ecosystem.
- *Global climate change.* If global warming occurs, species that cannot adjust to warmer temperatures are likely to become extinct.

8. Explain that habitat loss is an immediate cause of biodiversity loss, but any strategy to preserve biodiversity must take into account the underlying or root causes. Again, show a transparency made from Overhead Master 17-3. This time, focus on the population increase since 1900 and the connection between this increase and deforestation. The graph clearly shows two root causes of biodiversity loss: (1) population growth and (2) increasing consumption of resources. Ask:

- Why have the world's forests decreased as the population increased? (Forests have been cut down so that the land can be used for agriculture. There is an increasing demand for timber, for everything from chopsticks and paper to housing and furniture. Wood is the major source of energy in the developing countries, whose populations are increasing most rapidly.)
- Are these trends likely to continue? (Yes, the world population will probably double over the next 50 years. This will greatly increase the pressure on forests and other renewable resources.)
- How do population growth and increasing resource consumption affect biodiversity? (These trends pressure humans to convert wildlife habitat into agricultural and urban land. Remind students of change they have seen in your community, as woods and fields are converted to housing developments, roads, shopping centers, schools, etc. These trends produce wastes that pollute habitat and poison wildlife.)

9. Discuss other causes of biodiversity loss:

- *Ignorance about species and ecosystems.* A species may be lost because we didn't know it existed at a site that was developed. In some cases, a species may be known locally but the knowledge may die out as traditional ways of life change.
- *Government policies.* For example, policies that encourage agriculture or forestry can destroy biodiversity.
- *Effects of global trading systems.* The trend is toward specialization. Developing countries concentrate on certain crops such as coffee or bananas. As the number of crop species declines, so does the complex system of supporting species such

as insects that pollinate the crops. Creation of large plantations also destroys species-rich forests and wetlands.

- *Inequity of resource distribution.* Local communities who depend on land and biotic resources (for example, indigenous peoples of the rainforest) don't control the resources. Richer countries have technology and money to develop and exploit the natural resources of poor countries. Also, most poor countries are heavily in dept.
- *Value of biodiversity is ignored.* Biodiversity's value isn't recognized. For example, the value of nontimber goods the forest provides—the fruits, nuts, resins, oils, subsistence food, and fuelwood—are ignored in economic assessments of forest use, but studies show their value may far exceed that of the timber.

10. Examine how these root causes of biodiversity interact. For example, in Asia, the global market for shrimp has encouraged national governments to create policies favoring investment in shrimp farming. To do this, coastal mangrove swamps, an important habitat for fish, have been destroyed. Shrimp farming uses up fresh-water resources and pollutes the water, which is flushed into mangroves. Costs of the habitat loss are paid by local people who depend on the mangrove ecosystems for fish protein, revenue, and forest materials.

11. Organize the class into small groups and ask them to consider why we should be concerned about loss of biodiversity. Answers to this question can be developed along several different lines:

- *Aesthetic.* Each species and ecosystem adds to the richness and beauty of life on earth. Once a species becomes extinct, it is gone forever. When an ecosystem is destroyed, it is either impossible or extremely difficult to recreate it.
- *Ethical.* Each species is unique and has a right to exist. Each species is worthy of respect regardless of its worth to human beings. This point of view was recognized in the World Charter for Nature, adopted by the United Nations in 1982.
- *Economic.* Each species is of potential value to humans—as are healthy ecosystems. The global collection of genes, species, habitats, and ecosystems is a treasure trove that provides for human needs now and is essential for human survival in the future. Humans depend on other species for all of their food and many medicines and industrial products. Humans also depend on the intricate functioning of other species to provide "ecological services" such as purifying water, cycling nutrients, and breaking down pollutants. Genetic diversity is important in breeding crops and livestock. The loss of crop species has severe implications for global food security. Crop breeders need a diversity of crop varieties in order to breed new varieties that resist evolving pests and diseases. Many crops have been "rescued" with genetic material from wild relatives or traditional varieties.
- *Ecological.* Species evolve to fill particular niches or habitats. Many species depend on each other in intricate ways for survival. Destroying one species can lead to further extinctions or changes. No one can be sure where we begin the road to no return. With each extinction, life on the planet gets closer to extinction.

12. Explain that to develop strategies for conserving biodiversity, choices must be made. Where to begin? What is most important to save? There are three basic elements of conserving biodiversity: (a) save it; (b) study it; and (c) use it sustainably and equitably.

Write these three approaches on the chalkboard. Then, ask students to take another look at the case study in Handout 17-3. Can students identify these three approaches?

- The program focuses on identifying and studying the country's biological diversity.
- The government has set up a national system of conservation areas to preserve biodiversity. Part of Merck's $1 million initial payment and future royalties will go to fund the conservation areas.

The INBIO program shows that loss of biodiversity is not a hopeless, inevitable situation. There are many things that can be done—by individuals, by local and national governments, by nations working together, and by citizen action.

13. Again working in their groups, have students consider how they can study, save, and use biodiversity:

- What can students do to study biodiversity? (Take courses in school; subscribe to magazines; attend education programs at local museums, zoos, nature centers, etc.; watch television programs.)
- What can students do to save biodiversity? (They could join a local citizen action group or form a new one in the school community; join and support local, national, and international conservation organizations; work as a volunteer in a park or zoo; support laws that protect habitat—for example, zoning laws.)
- What can they do to use biodiversity sustainably and equitably? (They could make changes in their buying habits and lifestyle to reduce consumption of resources. They could recycle).

14. Finally, have students return to Handout 17-1. Using Handout 17-4, discuss answers with students. Which fact was most surprising? Ask students to tell how their initial ideas about biodiversity have changed over the course of the lesson.

Follow-up:

1. Ask students to see how many varieties of apples they can name. Tell them that at the beginning of this century, there were more than 7,000 apple varieties in use in the United States; today, 85 percent of these have been lost. Have students bring to class as many different kinds of apples as they can find. Discuss how the different kinds vary in size, color, shape, and taste. Ask students to consider why a few varieties have become so popular. Why do we need many varieties? Is it important to preserve rare varieties? For example, Seed Savers Exchange in Decorah, Iowa, is developing an orchard to preserve 500 old-time apple varieties. Explore how new varieties of apples are developed.

2. Tropical rain forests are characterized by an amazing number of different plant species. A tract less than 2 1/2 acres (1 hectare) of Peru's Amazon forest contained 275 species of trees. In a study of 120 square acres (100 square meters) of lowland tropical rain forest in Costa Rica, 223 species of vascular plants were counted. A tract of woodland in a temperate area in the United States has many fewer species. To illustrate this contrast, have the class take a census of a tract of woodland near you. Develop a plan to record the different species of trees, using guidebooks and other materials to help identify them. If possible, record bushes, flowering plants, grasses, and other species. Have students summarize their findings and make generalizations about number and types of plant species found.

TEST YOURSELF:
HOW MUCH DO YOU KNOW ABOUT BIODIVERSITY?

Mark **T** in front of each statement you believe is true. Mark **F** in front of each statement you believe is false.

______1. The total number of species is not known.

______2. More than one-half of the world's species live in tropical forests.

______3. About 10 million species have been identified by scientists.

______4. The earth has many more species than it needs.

______5. Most species are of no direct benefit to humans.

______6. Biological diversity is more threatened now than at any time in the past 65 million years.

______7. The loss of forests, wetlands, grasslands, and other habitats contributes to loss of biodiversity.

______8. Many species become extinct without ever being identified.

______9. Large plants, birds, and mammals make up about half the world's species.

______10. Coral reefs are as rich in biodiversity as tropical forests.

______11. Many islands are home to species found nowhere else.

______12. Fewer than 100 species currently provide most of the world's food supply.

______13. Creating parks and zoos is the best way to preserve biodiversity.

______14. The biological resources of developing countries are a potential source of income.

______15. Two major causes of biodiversity loss are population growth and the increasing consumption of natural resources.

______16. Once a species becomes endangered, it is doomed to extinction.

FACTS ABOUT BIODIVERSITY

Tropical forests are a unique and endangered resource. They provide habitat for millions of plant and animal species, recycle nutrients, protect soils and watersheds, and provide many products and services to people. These forests are being cleared rapidly, causing habitat destruction and extinction of species. Deforestation threatens biodiversity, a global resource made up of the variety of life forms on earth, both wild and domesticated.

State of the Forests

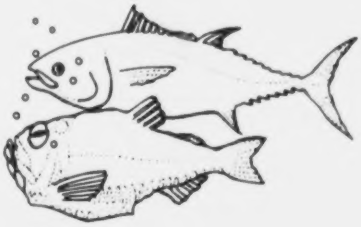
- About one-third of the world's land area is covered by forests.
- Just over one-half of the world's forests are in developing countries.
- New studies indicate the world is losing about 17 million hectares (an area four times the size of Switzerland) of tropical forests each year. Loss of forests is called deforestation.
- Causes of deforestation include permanent conversion to agricultural land; logging; demand for fuelwood, fodder, and other forest products; grazing; fire; and drought.
- Brazil has 30 percent of the world's tropical forests and the largest area of annual deforestation. The vast majority of trees cleared in the Amazon region are burned or left to rot when land is cleared for agriculture.
- Deforestation is second only to burning of fossil fuels as a human source of carbon dioxide, one of the major gases that may cause the global climate to warm.
- Deforestation leads to soil degradation and destroys habitat, leading to the extinction of plants, animals, birds, and insects.

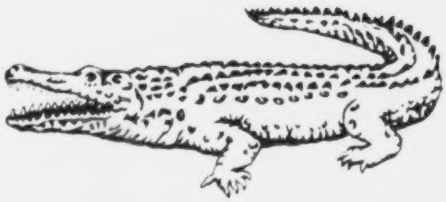
State of the World's Habitat and Species

- The habitats richest in biodiversity are the tropical moist forests of Southeastern Asia, central and west-central Africa, and tropical Latin America. These forests, described as the global "hotspots," contain more than half of all species.
- At least half of the world's species are contained in just 7 percent of the world's land surface.
- The exact number of species on earth is not known. Less than 5 percent of species in the tropics have been identified. Worldwide, on average, about three new species of birds are found each year. An estimated 40 percent of freshwater fishes in South America have not yet been classified.
- More than 700 species of vertebrates, invertebrates, and vascular plants have become extinct since 1600, and untold numbers probably became extinct without ever being described.
- Only 5 percent of the world's land surface is in national protected areas. These include nature reserves, national parks and monuments, habitat and wildlife management areas, and protected landscapes.

Trends

- The rate of deforestation is likely to increase, although in some areas there has been dramatic improvement.
- There is growing concern about destruction of the forests, especially the tropical rain forests.
- Wildlife habitat is threatened by humans and by the potential threat of climate change.
- The trade in animals and animal products is having devastating effects on some wildlife populations, such as elephants, parrots, and large reptiles.
- Global warming would lead to widespread extinctions because habitats would shift, shrink, or disappear.





COLLECTING SPECIES DATA IN COSTA RICA

Costa Rica is a small country in Central America, located between Nicaragua and Panama. Once almost all the country was covered by forests. Now, most of the forests have been cleared for agriculture, but the Costa Rican government has set aside 25 percent of its land as forest preserve. These forests are rich in biological resources, and a Costa Rican research institute is experimenting with a new way to investigate these valuable resources: training local people to gather and classify specimens from the tropical forest.

A New Model for a National Biodiversity Survey

The Instituto Nacional de Biodiversidad (INBIO), founded in 1989 with the help of the national government, is a private nonprofit organization. It serves as a clearinghouse for information on and monitoring of Costa Rica's flora and fauna—between 500,000 and 1 million species in all—and has begun a comprehensive national survey of them. The name, location, conservation status, and potential commercial uses of each species are catalogued on computer. Using the catalogue, researchers can look for possible chemical uses among newly described wild plant species. Plants free of insect damage or fungal growth, for example, may contain natural chemicals that act as insect repellents, growth inhibitors, or antibiotics. Such finds are worth money to agrochemical, pharmaceutical, or biotechnology companies. For a fee, INBIO helps commercial users "prospect" in the catalogue. INBIO's first major customer was Merck & Co., Inc., the world's largest pharmaceutical company, which has a successful history of developing pharmaceuticals from natural sources. In exchange for plant, insect, and microbe samples from INBIO, Merck agreed to pay INBIO $1 million as well as royalties on the sale of any products that Merck ultimately develops. Both Merck and INBIO hope that useful chemicals found in samples could then be synthesized in the laboratory rather than harvested from the forest. Part of the research funding will go to the Costa Rican national system of Conservation Areas to conserve biological diversity.

Costa Rica (like many tropical countries) has a shortage of taxonomists—scientists who can identify and classify species. INBIO's solution is innovative: it hires and trains local people to act as field collectors and do initial identification of insect specimens for the national biodiversity survey. The first class of 16 "parataxonomists" went into the field in 1989 and are now collecting 100,000 insect specimens per month. During their first six months, they collected four times as many insect specimens as had been put into Costa Rica's national collections during the previous 100 years. The parataxonomists include former housewives, farmers, ranchers, high school students, and national park guards. The specimens are sent from the field to INBIO, where apprentice curators classify them. Finally, international experts are brought into confirm identifications and make definitive taxonomic judgments.

Questions

1. What is biological diversity or “biodiversity”?
2. What is the purpose of this national biodiversity survey?
3. How do “parataxonomists” differ from taxonomists?
4. Why is the INBIO survey using “parataxonomists”?
5. Why is Merck & Co. paying $1 million to fund the biodiversity study?
6. If any medicines are developed, will this help efforts to conserve the Costa Rican forests?
7. How likely is it that this project will yield new medicines?
8. If you and other students were to train as “parataxonomists” and conduct similar collecting trips in local habitats (forests, wetlands, etc.), would you be likely to find as many new species as the INBIO collectors?

ANSWERS TO "HOW MUCH DO YOU KNOW ABOUT BIODIVERSITY?"

1. **True.** There may be as many as 30 million species, but scientists estimate there are about 10 million. Most of them are inconspicuous organisms, such as microbes, insects, and tiny sea creatures.

2. **True.** Over one-half of the world's species live in tropical moist forests.

3. **False.** It is estimated that fewer than 1.4 million of the world's species have been named. Most of the unidentified species live in the tropics. As we begin to explore other habitats, surprising discoveries are made. Scientists believe the deep sea floor could contain as many as a million undescribed species.

4. **False.** Species evolve to fill particular niches or habitats that exist on earth. Many species depend on each other in intricate ways for survival. Destroying one species can lead to further extinctions or changes.

5. **True** or **False.** We don't know. Scientists are often delighted to find a cure for a dreaded human disease in a lowly mold or obscure plant. It seems foolish to destroy our genetic storehouse before we have even taken inventory. Also, extinction of a species can upset the balance of a complex ecosystem.

6. **True.** Tropical deforestation is the main force behind this crisis. The destruction of wetlands, coral reefs, and temperate forests is also important.

7. **True.** As habitats are fragmented and destroyed, many species become extinct.

8. **True.** Habitats are destroyed without being studied. Ignorance about species and ecosystems contributes to species extinction.

9. **False.** Large, visible species of mammals, birds, and plants make up fewer than 5 percent of the world's species.

10. **True.** Coral reefs are habitats of unparalleled biotic richness.

11. **True.** Remote islands such as Hawaii have unique flora because evolution takes place there in isolation.

12. **True.** Fewer species are grown today than in the past. Genetic diversity is declining.

13. **False.** Zoos and parks are traditional strategies for protecting biodiversity and have helped preserve many species. However, newer strategies are needed to address the root causes of biodiversity loss.

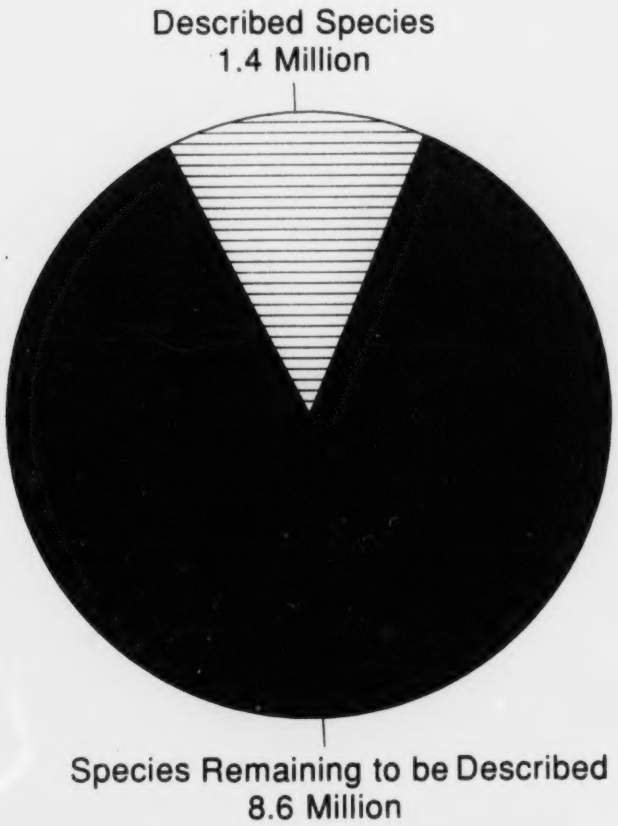
14. **True.** As the INBIO study indicates, the vast genetic resources of tropical countries could become the "oil" of the 21st century.

15. **True.** Other root causes are ignorance of species and ecosystems, poorly conceived policies (for example, those that favor deforestation), inequity in resource distribution, and the failure of economic systems to account for the value of biological resources.

16. **False.** Species can be protected by preserving habitat and by breeding and propagating programs in zoos and botanic gardens. But such efforts are expensive and limited in scope.

Overhead Master 17-1

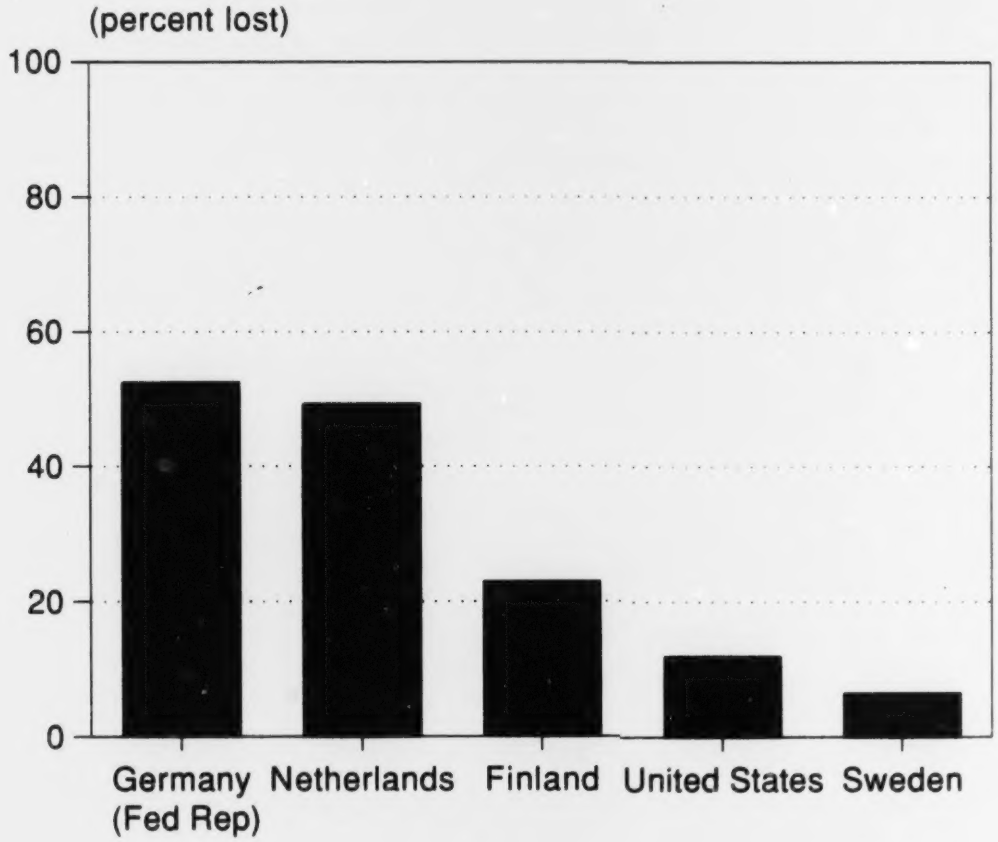
SPECIES REMAINING TO BE DESCRIBED



Estimated Total Species = 10 Million

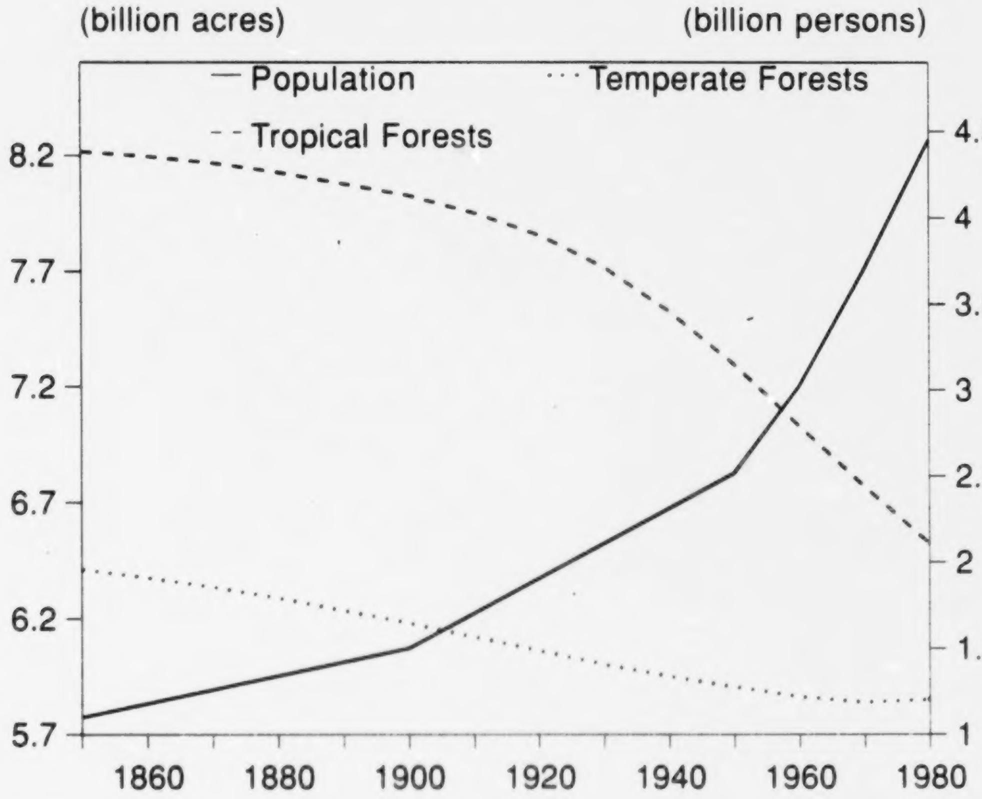
Source: World Resources Institute, The World Conservation Union, and the United Nations Environment Programme, in consultation with the Food and Agriculture Organization and the United Nations Education, Scientific and Cultural Organization, *Global Biodiversity Strategy* (Washington, DC: World Resources Institute, 1992), p. 156.

WETLAND LOSS IN SELECTED INDUSTRIALIZED COUNTRIES, 1950-80



Source: Organisation for Economic Co-operation and Development (OECD), *OECD Environmental Data Compendium 1991* (Paris: OECD, 1991), p. 75

TRENDS IN DEFORESTATION AND POPULATION GROWTH, 1850-1980



Source: World Resources Institute and The International Institute for Environment and Development, *World Resources 1987* (New York: Basic Books, Inc., Table 18.3, p. 272.

18. DEMOCRACY AT THE TURN OF THE CENTURY

Introduction:

With the demise of communism in the Soviet bloc, many Americans—including American leaders—assumed that all formerly communist countries would become democratic. The same is thought to be true of Asian and African nations emerging from repressive regions. This assumption may be faulty, however, as nations contemplating establishing democratic systems experience a range of problems. This activity introduces some of these concerns and invites students to reflect on their own educational experiences as panelists at an "International Conference on Education for Democratic Citizenship."

Objectives: Students will be able to:

1. Describe the requirements of democratic citizenship.
2. Recognize some of the problems that face nations trying to establish democratic governments.
3. Suggest educational strategies for preparing citizens in new democracies.

Time Required: 3 class periods

Materials and Preparation: Make copies of Handout 18-1 for all students.

Procedure:

1. Write the phrase *democratic citizen* on the chalkboard. Ask students to write the phrase in the center of a piece of paper and create a word web showing the qualities, skills, attitudes, rights, responsibilities, and so on that they associate with being a citizen in a democracy.

2. When students have completed their webs, conduct a class discussion. Try to reach agreement on a list of skills, attitudes, or qualities that would make a person a good citizen in a democracy. Challenge students to go beyond such skills as voting to ideas like ability to learn about and understand important issues and willingness to put the common good above self-interest.

3. Tell students that in the past several years, a number of nondemocratic governments have ended and many countries are trying to set up new governments. This includes the countries of Eastern Europe and the Soviet Union, as well as such African nations as South Africa. What kinds of governments do students think will emerge in these countries?

Activity developed by Laurel R. Singleton.

4. Explain that while many outsiders believed that democracies would emerge as soon as communism fell, countries face many challenges in establishing workable democracies. Distribute Handout 18-1 and allow time for students to read it. Conduct a class discussion of the information provided in the handout, focusing on some of the challenges that face leaders trying to establish democratic governments.

5. Explain that many U.S. consultants, or experts, are traveling to countries around the world sharing ideas about setting up new governments or changing educational systems to meet the needs of democratic citizenship. Tell students that they, as experts in the U.S. educational system, are going to present at the "International Conference on Education for Democratic Citizenship." Based on their own school experiences in an established democracy, they will give their recommendations on how best to prepare young people to be good citizens.

6. Organize the class into five groups. Each group is to plan a three-minute presentation of their best ideas on education for citizenship in a democracy. In preparing their presentations, students may find it useful to think about the following questions:

- What in my school experience has helped me develop skills, attitudes, or qualities that I will need as a citizen?
- What has been ineffective in helping me develop skills, attitudes, or qualities that I will need as a citizen?
- What experiences outside of school have helped me prepare for the role of citizen? How might they be incorporated into a school program?

Remind students that money may be a problem in many countries. Thus, while they may suggest some expensive ideas, they should try to balance them with less-expensive ones.

Allow at least half a class period for students to generate ideas and prepare their presentations.

7. Have students make their presentations to the class.

8. To conclude the lesson, ask each student to write a paragraph identifying the idea he/she thought was the best one presented and explaining why he/she chose that idea as best.

Follow-up:

Have students regularly scan the newspaper for articles about elections in newly emerging democracies. What problems do these countries experience? How might those problems be addressed in future elections? You might reserve a section of a bulletin board for students to post relevant articles and their commentary on the articles.

CAN DEMOCRACY WORK FOR EVERYONE?

Only 20 of the world's 170 countries are considered "mature" democracies. About 40 more are newer democracies. Overall, less than half the world's people live in democracies.

Leaders of countries that are trying to establish democratic governments warn that their efforts may fail. Why is this true? Why is democracy apparently so hard to establish and maintain? The reasons are many.

People who have suffered under totalitarian regimes often have little faith in government. Their experiences have taught them to believe nothing the government tells them. Thus, they may find it hard to believe leaders who tell them they will now have a voice in the government. If they do not believe that democracy will be real, they may not bother to take part.

Some people have false ideas about what life in a democracy will be like. When the new government does not measure up to their expectations immediately, they lose faith in democracy. For example, a popular cartoon in the Czech Republic represents democracy as a person on a sofa surrounded by a VCR, TV, computer, microwave, and other consumer items. People who expect democracy to bring material riches may be disappointed when bad economic conditions persist after the government changes.

Another example of high expectations can be found in South Africa. In South Africa under apartheid, black South Africans did not have the standard of living that whites enjoyed. With the new participation of black South Africans in government, many black South Africans naturally hope that this gap will be closed quickly. If this does not happen, what might be the result for South African democracy?

The example of South Africa also suggests another reason why democracy can be hard to establish. Many countries include groups that do not like each other. These groups do not have a history of working together to solve problems. Indeed, in some areas of Eastern Europe and the former Soviet Union, civil wars have broken out since communism ended. It is hard to establish a democracy in which groups that are fighting can work together for the common good.

In addition, the traditions of some countries may not support democratic practices. For example, people in a country like Cambodia, which does not have a tradition of changing leaders peacefully, may think it is unlikely that defeated office holders would leave office willingly after losing an election. Similarly, some countries may not have a tradition of the rule of law; law in their countries may have been based on traditions, religious beliefs, or the commands of one ruler.

19. REFUGEES:
HAS THE WELCOME MAT BEEN PULLED?

Introduction:

According to a 1993 United Nations report, 1 of every 125 people in the world has been forced out of his/her normal life and home by war, persecution, or violence. At the same time, many countries are becoming less welcoming when refugees seek asylum, whether temporary or permanent. In this lesson, students explore the refugee problem, learning about its causes and debating what U.S. policy on refugee issues should be.

Objectives: Students will be able to:

1. Explain reasons why people become refugees.
2. Explain reasons why some countries have become less welcoming of refugees.
3. Debate policy issues related to refugees.

Time Required: 3-4 class periods

Materials and Preparation: You will need copies of Handout 19-1 for all students; you will need enough copies of each of the Debate Instruction Cards for one-sixth of the class. The debate will be most effective if students have some library research time or have access to resources within the classroom. In-class resources would also be useful in the introduction to the lesson.

Procedure:

1. Briefly discuss with students the definition of *refugee*—a person who leaves his/her home country due to fear of persecution on account of race, religion, nationality, membership in a particular social group, or holding a particular political opinion. Point out that nearly 20 million people worldwide are refugees. Ask students why they think there are so many refugees. You may want to give them newspapers and newsmagazines to look through for events that might cause people to flee their homes. Where are the people fleeing from? Why? Can students imagine having to flee from their homes in order to live?

2. Distribute Handout 19-1 and allow time for students to read it. Discuss the various reasons given for becoming a refugee, as well as reasons why some countries have become less welcoming toward refugees.

Activity developed by Laurel R. Singleton.

3. Tell the class that many people think the United States should rethink its policy towards refugees. U.S. policy has an important impact on the international situation because the United States is the world's biggest contributor to international programs to help refugees. Lay out the three policy issues that students will be considering:

- The United States should accept more refugees for resettlement.
- The United States should support a broader definition of *refugee* so that people who flee for economic reasons or because of natural disasters would be included.
- The United States should support refugee-prevention strategies.

4. Divide the class into six groups and give the members of each group one of the Debate Instruction Cards. Tell the students how long they will have to prepare for the debate. Make resources available for students' use in preparing their arguments, or allow students to spend at least half a class period in the media center.

5. Conduct the three debates; after each, let the members of the four groups that were not involved in the debate vote on which policy they would choose based on the arguments presented.

Follow-up:

To focus on the human side of the refugee problem, ask students to write imaginary diaries of refugees, chronicling the events encountered after leaving the home country. Other students might read young adult novels about refugees, such as:

- *Journey of the Sparrows*, by Fren Leeper Buss (New York: Lodestar, 1991). El Salvador.
- *Onion Tears*, by Diana Kidd (New York: Orchard, 1991). Vietnam.
- *The Clay Marble*, by Minfong Ho (New York: Farrar, 1991). Cambodia/Vietnam.

A nonfiction book that would enhance students' understanding of the refugee issue is *Into a Strange Land: Unaccompanied Refugee Youth in America*, by Brent Ashabranner and Melissa Ashabranner (New York: Dodd, 1987).

REFUGEES: WHO, WHERE, AND WHY

In 1993, the Office of the United Nations High Commissioner for Refugees issued its first global study of refugees. According to the report, 19.7 million refugees live outside their home countries; another 24 million are displaced—forced from their homes—within their own countries. The number of refugees in 1993 is more than eight times the number 20 years ago.

While the number of refugees is increasing, many countries are trying to close their doors to refugees. In fact, the report noted a rise in outright hostility toward refugees in some countries.

What accounts for the huge numbers of refugees, and why do countries like Germany and the United States seem less willing to welcome refugees? The answers are complex.

- With the fall of communism, borders that had previously been closed became open to migrants. In Europe, people from formerly communist countries, where the economies are in bad shape, are trying to move to Western European nations, such as Germany. West Germany welcomed refugees from communist countries during the Cold War. Because the numbers since the fall of the Berlin Wall have gotten so large, however, Germany is now becoming less welcoming. In 1991 there were 600 cases of foreigners being attacked and beaten in Germany.
- In Africa, long civil wars, drought, and poverty have uprooted many people. People have become so desperate to escape that they stowaway on ships. Some stowaways have been treated very poorly. For example, in February 1993, seven stowaways were forced off a ship from Hong Kong onto a makeshift raft. Two died; the other five drifted to Somalia, where a civil war is raging.
- The Gulf War displaced 5 million people, some only temporarily. In an example of reluctance to grant asylum—protection—to refugees, Turkey turned away thousands of Kurds, who tried to flee Iraq after their revolt against Saddam Hussein failed. Iran did give the Kurds asylum, perhaps because of the longstanding conflict between Iran and Iraq.
- Since the end of the war in Vietnam in 1975, people have continued to flee from Vietnam, Cambodia, and Laos because of persecution and economic hardship. Many have been resettled in the United States, Canada, France, and Australia, but some have remained in refugee camps in Thailand for as long as 10 years. Some people have been forced to return to Vietnam against their will.
- Repression, persecution, and poverty have forced many Latin Americans to leave their homes. Many have tried to settle in the United States. Economic problems in the United States have caused Americans to become less friendly towards immigrants. The case of Haitian refugees has been especially controversial. The United States has had an open door policy towards refugees escaping Castro's communist regime in Cuba. However, the door is not held so wide for Haitians fleeing what many believe is an equally brutal government. While some Haitians are admitted legally, those picked up on boats on their way to Florida are sent back to Haiti.

Card 1

Your group will present the arguments for the United States' accepting more refugees for resettlement. Look for information to support the following line of reasoning:

As a rich country, the United States can afford to do more to help refugees. This includes opening its doors to more of them. The United States accepts certain refugees, such as Cubans, without question. Why should it discriminate against others who are equally deserving? Also, the United States, as a country of immigrants, has an ethical obligation to accept others "yearning to breathe free." It is well known that refugees contribute to the labor force, particularly in entry-level jobs.

You will have four minutes to present the arguments for your position. This will be followed by four minutes for the opposing side to present its arguments. You will then have two minutes to rebut your opponent's arguments; that is, to show why their arguments are wrong. Your opponents will close the debate with their two-minute rebuttal.

Card 2

Your group will present the arguments against the United States' accepting more refugees for resettlement. Look for information that will support the following line of reasoning:

Agreeing to accept even more refugees would place too great a burden on the communities where the refugees settle. The U.S. economy simply isn't strong enough to handle many more people. Opening doors wider could trigger the kind of antiforeigner sentiment now seen in Western Europe.

The opposing side will open the debate with a four-minute presentation of their arguments. You will then have four minutes to make the case for your position. Following your presentation, the opposing side will have two minutes to rebut your arguments; that is, to show why your arguments are wrong. Your group will close the debate with your two-minute rebuttal.

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*Arguments adapted from 1992 edition of *Great Decisions* (New York: Foreign Policy Association, 1992).

Card 3

Your group will present the arguments for broadening the definition of *refugees* to cover people fleeing natural disasters or poor economic conditions. Look for information to support the following line of reasoning:

At present, unless a refugee is classified as a victim of political persecution, that person is sent back to the home country (repatriated). The system for deciding whether someone is a political refugee cannot handle the number of refugees that it currently must deal with. Some people end up being sent back to countries were they are persecuted or even killed. Having another option could guard against such errors. And the problems faced by people fleeing natural disasters or severe economic problems are as real as those faced by political refugees.

You will have four minutes to present the arguments for your position. This will be followed by four minutes for the opposing side to present its arguments. You will then have two minutes to rebut your opponent's arguments; that is, to show why their arguments are wrong. Your opponents will close the debate with their two-minute rebuttal.

Card 4

Your group will present the arguments for not broadening the definition of *refugee* to include those fleeing natural disasters and economic problems. Look for information to support the following line of reasoning:

Such a plan would rapidly overwhelm the system for dealing with refugees. In addition it would probably create a backlash—feelings against refugees—in countries providing most of the aid to refugees. This could have the effect of tightened rather than relaxed national admission policies. It could even jeopardize the present access to asylum for political refugees.

The opposing side will open the debate with a four-minute presentation of their arguments. You will then have four minutes to make the case for your position. Following your presentation, the opposing side will have two minutes to rebut your arguments; that is, to show why your arguments are wrong. Your group will close the debate with your two-minute rebuttal.

Card 5

Your group will present the arguments for the United States' supporting refugee-prevention strategies. Look for information to support the following line of reasoning:

It is in the interest of the United States to prevent an increase in refugees. It can do so by assisting development efforts in poorer counties and by making sure human rights are protected. The United States should not be friendly with or assist countries who do not respect those rights. At the same time, the United States should avoid policies that add to the number of refugees; for example, economic embargoes create economic refugees.

You will have four minutes to present the arguments for your position. This will be followed by four minutes for the opposing side to present its arguments. You will then have two minutes to rebut your opponent's arguments; that is, to show why their arguments are wrong. Your opponents will close the debate with their two-minute rebuttal.

Card 6

Your group will present the arguments why the United States should not support refugee-prevention strategies. Look for information to support the following line of reasoning:

If people fear persecution, they should have the right to seek asylum. Also, in practice it is difficult to eliminate the conditions that create refugees and economic migrants. If there were a simple solution to poverty and oppression, changes would have taken place before now. There is no point in throwing money and resources at a problem with no clear solution.

The opposing side will open the debate with a four-minute presentation of their arguments. You will then have four minutes to make the case for your position. Following your presentation, the opposing side will have two minutes to rebut your arguments; that is, to show why your arguments are wrong. Your group will close the debate with your two-minute rebuttal.

20. POVERTY AND POPULATION

Introduction:

Poverty and population are complex problems facing the world. This lesson is designed to give students a broad overview of the issues, as well as some specific facts to think about as they begin grappling with possible solutions to the problems. The lesson involves reading, discussion, and cooperative learning.

Objectives: Students will be able to:

1. Explain some of the causes of worsened poverty since the 1980s.

2. Describe the disparities that exist among countries.

3. Recognize problems that are linked to poverty (e.g., hunger, lack of shelter, inadequate health care).

4. Suggest possible solutions to the problem of poverty.

Time Required: 2-3 class periods

Materials and Preparation: You will need copies of Handout 20-1 for all students. You will also need to make one set of the Fact Cards. A large world map and butcher paper would also be useful.

Procedure:

1. Tell students that they are going to be looking at the problem of poverty around the world. Ask them to brainstorm, as a class or in small groups, what they already know about the topic. You may want to list or chart their information on butcher paper so they can refer to it throughout the lesson.

2. Next, distribute copies of Handout 20-1 and allow time for students to read it or read it aloud with the group. Discuss what students read that either confirmed or challenged what they knew about poverty.

3. After students have discussed the reading, ask them what additional questions they have about poverty. You may want to suggest that they begin each question by asking who, what, where, when, why, or how. Again, you may want to post the questions on butcher paper so students can note answers they have found as they progress through the lesson.

Adapted from *Our Divided World: Poverty, Hunger, and Overpopulation*, by Micki McKisson and Linda MacRae-Campbell (Tucson, AZ: Zephyr Press, 1990). © 1990 Zephyr Press, P.O. Box 66006, Tucson, AZ 85728. Used with permission of the publisher.

4. Explain to the students that they are going to be working together to learn more about the problem of poverty. Divide the class into four groups, assigning each group one of the following topics: (1) general information, (2) geography, (3) problems of poverty, and (4) solutions to poverty. Give each group the set of fact cards correlated to the problem. If there are fewer than eight students in each group, ask for volunteers to take two cards. Each student is to read his/her card and select two facts to teach to other members of the group. Allow 15-20 minutes for the reading and sharing.

5. Next, tell students that they are to decide as a group on eight to twelve facts that they will teach the rest of the class. Their presentations of these facts should be as creative and interesting as they can make them. Some of the methods they could use in their presentations are:

- Visuals, charts, and diagrams. (The Geography group should be strongly encouraged to include maps in their presentation.)
- Poems, songs, or stories.
- Role plays, games, or skits.
- Question-and-answer or riddle formats.
- Their own creative teaching strategies.

Allow 20-30 minutes for groups to plan their presentations.

6. Set aside a class period for the presentations, allotting each group one-fourth of the time. Groups should allow at least two minutes at the end of their presentation for questions and answers.

7. As a culminating activity, you may want to have students draw or write about a poverty-related problem and proposed solution that seems especially important to them.

Follow-up:

Encourage students to write letters to organizations working in the areas of poverty and population to ask for information about their programs. You can select organizations from the **Resources** section of this book as possible places to which students can write.

OVERVIEW OF THE ISSUE

Unfortunately, poverty and its resultant human misery are widespread. More than 400 million people in the world suffer from hunger, starvation, and malnutrition. Sickness and death result from hunger-related diseases. In Asia and Africa, as many as 100,000 children go blind each year from a simple vitamin A deficiency.

Many poor people live in the crowded and impoverished conditions of squatter towns, which surround most large cities in less developed countries. Whether they are named *favelas* in Brazil, *barrios* in Mexico, or shanty towns in India, such areas provide the most meager existence possible. In Guatemala City, there is a saying, "The dead live better than the poor." The manicured lawns and flower beds of a cemetery for the wealthy contrast sharply with the dwellings of the poor, which are made of corrugated metal and cardboard.

The numbers of poor are steadily increasing, especially in countries in the Southern Hemisphere. Eighty percent of the estimated one billion poor live in India, Pakistan, and Bangladesh. Experts point to the widening gap between the rich countries of the North and the poorer countries of the South as one of the reasons poverty in Africa, Asia, and Latin America is on the rise.

Disparity (lack of equality) exists among the countries of the world and can best be illustrated by a nation's earning capacity. Nations in the Northern Hemisphere, with only 25 percent of the world population, produce 80 percent of the gross global product (GGP). In contrast, nations in the Southern Hemisphere, with 75 percent of the world population, claim only 20 percent of the world income.

The less developed countries have frequently borrowed money from wealthier nations. The Third World debt problem exploded in 1982. As a result, many poor nations were forced to slash imports as their funds dwindled and national debts increased. Nearly 25 percent of what these nations earn by selling their products goes to pay off their debts to foreign banks. This situation has worsened since there is less demand for the products exported by these countries and prices have dropped 30 percent. Adding to the debt problem is the fact that every 1 percent rise in U.S. interest rates, for example, adds about $4 billion to the debt of developing countries.

There is a sharp contrast in the GNP (gross national product) between industrialized and less developed countries. Third World debt, rising interest rates, and fewer export earnings are causing the gap to widen. The total earning capacity per person (GNP per capita) in Western Europe, Japan, and North America is 40 times greater than in less developed nations.

Governments in Asia, Latin America, and Africa, in order to help pay off soaring national debts, have reduced spending on services most needed by the poor. The consequences of these actions were highlighted by UNICEF in its 1988 annual report entitled, "The State of the World's Children." The report indicates that many families in developing countries "…are sliding back into severe poverty after 40 years of progress."

Poverty is found not only in less developed countries. There is also a growing concern about poverty in cities in the Northern Hemisphere. Lack of adequate food, housing, and employment, as well as crime, violence, and drug addiction, are some of the problems in the inner cities of Northern Hemisphere countries.

Nonetheless, whether in the Northern or Southern Hemisphere, the results of poverty are similar. Solving the problems associated with disparity requires global cooperation. It takes group and individual effort. Of course, foremost in finding solutions is the willingness of the fortunate to share with those who are not. UNICEF director James P. Grant believes that between now and the end of the century, we could transform the basic social conditions for the world's poor by spending one-half of one percent of all the money the world generates (gross global product). As the Chinese say, "Of all things, people are the most precious."

GENERAL INFORMATION

1. Cities in "less developed countries," sometimes called LDCs, are undergoing a population explosion. Every day an estimated 75,000 poor people move to the cities.
2. However, the majority of these people move to squatter settlements that surround most large cities in less developed countries. Squatter settlements are called *barrios* in Mexico, *favelas* in Brazil, and shanty towns in India and Africa.
3. Sixty-seven percent of the entire population of Calcutta live in shanty towns.

GENERAL INFORMATION

1. Many people living in the cities in the Northern Hemisphere also live in poverty. Nearly 20 million people in the United States are underfed.
2. Hunger, unemployment, inadequate or no housing, drug addiction, crime, and violence are the major problems affecting inner cities in the Northern Hemisphere.
3. Tension between social and racial groups and lack of shelter are compounded by competition for the few jobs available in the inner cities of industrialized nations.

GENERAL INFORMATION

1. The world economy began to deteriorate in the 1970s. As a result, economic growth declined, inflation rose, and unemployment in industrialized countries increased.
2. The price of money increased steadily, causing developing countries to go further into debt.
3. Globally, the gross national product (GNP) per capita has not improved since the 1970s.

GENERAL INFORMATION

1. The "Third World debt problem" exploded in 1982.
2. Many Third World countries were forced to slash imports as their funds dwindled and national debts increased. In 1983, the seven major debtors in Latin America cut imports to more than 40 percent below 1981 levels.
3. In an attempt to earn money to pay off national debts, some developing countries resorted to subsidies to help their exports.

GENERAL INFORMATION

1. The number of poor people in the world has steadily increased. Nearly 800 million people live on insufficient incomes; they are unable to provide for basic needs such as adequate food, shelter, health care, and education.
2. The nations in the Northern Hemisphere, with only a quarter of the world's population, produce 80 percent of the gross global product (GGP).
3. The Southern Hemisphere, which contains three-quarters of the world's population, claims only 20 percent of the world's income.

GENERAL INFORMATION

1. Between 400 and 500 million people in the world are severely malnourished.
2. The number of people unable to grow enough food or earn enough money to buy food is likely to increase to more than 600 million by the year 2000.
3. Throughout the world, food production is increasing faster than the population and yet does not reach the people who need it the most. However, recent studies indicate that the population in some countries is greater than what their land can support.

GENERAL INFORMATION

1. Fifteen to twenty million people die each year from hunger-related causes.
2. Three of every four people who die from hunger-related causes are children.
3. At least 100,000 children in Asia and Africa go blind each year. Blindness is caused by a vitamin A deficiency.

GENERAL INFORMATION

1. During the 1960s, aid given to developing countries was used to encourage rapid growth. Rapid growth plans included large-scale developmental projects, which acted as a way to close the gap between rich and poor.
2. Since the early 1970s, emphasis has been placed on education, health care, and training programs for the poor.
3. However, the depression in the early 1980s forced less developed countries to cut social programs and imports, switching their focus to exports.

GEOGRAPHY

1. Brazil is a leader in Third World development. Even so, it could take 362 years for Brazil to close its income gap with industrialized countries like the United States and Canada.
2. Mauritania is one of the poorest nations in the world. It would take this country 3,224 years to close the gap, if current trends continue.
3. Families living in industrialized countries spend 20 to 25 percent of their income on food. In many of the developing countries, the rural poor spend as much as 85 percent of their total income on food.

GEOGRAPHY

1. The average life expectancy in Mali is 30 years less than in Sweden.
2. Child mortality in Zambia is 20 times higher than in West Germany.
3. There is only one doctor per 17,500 citizens in Tanzania.

GEOGRAPHY

1. Brazil has the largest national debt in the world. In 1984, it owed $90 billion.
2. It is estimated, if current trends continue, it would take Brazil 362 years to pay off its debt.
3. Every 1 percent rise in U.S. interest rates adds about $4 billion to the debt of Brazil and other developing countries.

GEOGRAPHY

1. There are two major "poverty belts" in the world. One begins in Yemen and Afghanistan and reaches across Southern Asia and some Eastern Asian countries.
2. The other poverty belt extends across the middle of Africa.
3. Eighty percent of the estimated one billion poor live in India, Pakistan, and Bangladesh.

GEOGRAPHY

1. Experts have noticed a widening gap between rich and poor countries over the past two centuries.
2. Today, the gross national product (GNP) per capita in Western Europe, North America, and Japan is 40 times greater than in LDCs (less developed countries).
3. There are 34 countries with a per capita income of less than $400. Most of these countries are in Africa.

GEOGRAPHY

1. Many of the nations of the world suffering from abject poverty are located in the tropics, where the environment is extremely fragile.
2. Tropical environments are being degraded and destroyed by increases in population and massive deforestation by cattle-grazing and farming. Precious resources are lost when this practice focuses on short-term benefits.
3. Multilateral Development Banks (MDBs) loan about $22 billion each year for Third World development. Often these banks promote large-scale agricultural, hydroelectric, and cattle-ranching projects, which frequently damage the environment.

GEOGRAPHY

1. Developing nations owe an estimated $1.2 trillion to private banks, development funds, and other nations.
2. The debts have dwindled away the income of Third World countries. Twenty-five percent of what these countries earn by selling their products goes to pay off their national debts.
3. The price that developing countries get for their products (rubber, fuel, copper, and coffee) has dropped 30 percent in the past ten years.

GEOGRAPHY

1. Many people living in developing countries like India earn a yearly income of $100—many live on less.
2. More than 825 million adults in the world cannot read. Most live in the Southern Hemisphere, and the majority are women.
3. Only 3 percent of the landowners in 83 countries own and control 80 percent of the land. In Argentina, 2 percent of the landowners own 75 percent of the land.

PROBLEMS OF POVERTY

1. One billion people, or one-fifth of the world's population, are "absolute poor" and are hungry. Most live in the Southern Hemisphere.
2. Every day, 35,000 people die of starvation.
3. Twenty-four people starve to death every minute. Eighteen of those twenty-four are children under five years of age.

PROBLEMS OF POVERTY

1. Experts say there are many causes of poverty. Population growth, political inequity, and environmental destruction are some of the causes cited.
2. Characteristics of poverty include malnutrition, illiteracy, disease, high infant mortality, and a short life expectancy.
3. Seventy-five percent of people who die from hunger-related diseases are children.

PROBLEMS OF POVERTY

1. Twenty-five percent of the world's population, or one of every four people, do not have access to safe drinking water.
2. Thirty percent of the population in the 40 lowest income countries do not have safe drinking water.
3. In Ethiopia, only 6 percent of the entire population has access to safe drinking water. Many must walk miles to obtain water for drinking, cooking, and bathing.

PROBLEMS OF POVERTY

1. Half a million children died in 1988 in developing countries. The United Nations Children's Fund, in its annual UNICEF report "The State of the World's Children 1989," indicated the reason so many children died in 1988 is partially because many families in less developed countries "...are sliding back into severe poverty after 40 years of progress."

2. UNICEF discovered in 1988 that governments in Asia, Latin America, and Africa reduced spending on services needed by the poor. These services included health care and education. Cutbacks are due to increasing national debts.

3. UNICEF outlines the problems facing the world's children as hunger, poor health care, and a lack of education.

PROBLEMS AND CAUSES

1. Nearly 14 million children die each year from poor nutrition and from common illnesses like diarrhea.

2. The 37 poorest nations in the world have reduced spending by 50 percent on health care and 25 percent on education over the past few years to help pay off their increasing national debt.

3. Between 1980 and 1987 countries in Latin America, the Caribbean, and Africa considerably reduced the mortality rate for children under the age of five. The number of deaths in 1988 increased by 650,000 due to cutbacks in services and programs.

PROBLEMS AND CAUSES

1. The World Bank estimates that the per-capita growth in sub-Saharan Africa is expected to be zero. In Latin America only a slight gain is forecast.

2. Per-capita income in developing countries is less than one-tenth of that in industrialized countries.

3. Over the past twenty years, per capita income rose from $1,047 to $6,468 in industrialized countries. Income in less developed countries increased from $132 to $597.

PROBLEMS AND CAUSES

1. World food production has increased by about 3.2 percent a year. However, in Africa, food production has increased by only 1.9 percent. Africa's population is growing by 2.5 percent each year.

2. Much of Africa south of the Sahara is facing famine. In 1970, Africa was basically self-sufficient in food production and distribution. However, since 1988 nearly 30 countries have been considered by the U.N. Food and Agricultural Organization (FAO) to be "crisis deficit nations."

3. The 1988 year-end report issued by the U.N. Food and Agriculture Organization (FAO) disclosed that for the first time since World War II, global cereal production had declined for two years in a row. World cereal stocks are below the threshold set by the FAO as the minimum requirement for global food security.

PROBLEMS AND CAUSES

1. Seventy percent of the world's grains are consumed by the United States, Western Europe, Japan, and Australia. Most of this grain is used to feed beef and dairy cattle.

2. The average North American consumes 2,000 pounds of grain a year. Only about 150 pounds of that grain is consumed directly as grain or flour.

3. The rest, 1,850 pounds, is consumed in the form of milk, eggs, meat, and alcoholic beverages.

SOLUTIONS TO POVERTY

1. One-half of one percent (0.5 percent) of one year's world military expenditures would pay for all the farm equipment needed to increase food production and approach self-sufficiency in food deficit countries.

2. Two pounds of grain for every human being on earth are produced each day. That is enough to provide everyone in the world with 3,000 calories a day, well above the recommended daily minimum of 2,300.

3. In China, before the revolution in 1949, several million people died each year from starvation. Today, with a population twice what it was, nearly all are adequately fed. This is largely due to improved distribution methods.

SOLUTIONS TO POVERTY

1. In 1975, the Bangladesh government started an innovative program for rural village women. These women were provided with start-up loans to begin small businesses.
2. Approximately 123,000 women are enrolled in the program. Participants are informed about health care at weekly meetings.
3. Infant and child mortality could be reduced through improved nutrition, maternal and child health care, sanitation, and clean drinking water.

SOLUTIONS TO POVERTY

1. Some exports think one way to reduce poverty on a global basis is to slow the population growth.
2. To reduce the population growth, it is proposed that family-planning experts design programs tailored to the needs and belief systems of diverse societies.
3. In 1979, China launched a "one-family, one-child" policy in an effort to contain the population at 1.2 billion by the year 2000. The population growth (once the highest in the world) has been slashed in half. However, much controversy exists around this drastic solution.

SOLUTIONS TO POVERTY

1. Poverty in Third World countries is compounded by the widening gap between rich and poor nations.
2. Together, Third World countries owe $1.2 trillion to the banks and governments of industrialized countries like the United States, Canada, Japan, and the European Community.
3. With increasing debt, Third World nations are cutting social services designed to help the poor. Some experts suggest that debt payments be decreased or postponed to allow these countries to catch up.

SOLUTIONS TO POVERTY

1. *Time Magazine* in its special January 1989 edition, entitled "PLANET OF THE YEAR: EARTH," suggested that industrial countries such as the United States and the former Soviet Union reduce their nuclear and conventional forces to free funds for domestic and foreign aid in the form of social services and environmental programs.

2. Experts have suggested that the pressure to increase military spending be lessened on U.S. allies such as Japan, West Germany, and France. This would free funds, enabling such countries to contribute to "global security" by increasing aid to developing countries, rather than building weapons.

3. Some individuals believe aid for the Third World should be provided in exchange for reducing deforestation and using responsible environmental policies to conserve their resources.

SOLUTIONS TO POVERTY

1. Economic aid for developing countries must address a variety of needs. These include social services, environmental policies, and sustainable development programs that manage resources wisely.

2. Combining agriculture and forestry in replanting programs can provide jobs, protect soils, and increase food output and production.

3. Providing access to fertile land could help feed the impoverished citizens of developing countries.

SOLUTIONS TO POVERTY

1. The environment suffers greatly from the effects of rapid population growth and abject poverty.

2. In tropical countries, the rain forests are being destroyed to make room for large-scale agricultural projects, cattle grazing, and other forms of development.

3. In 1984, Thomas Lovejoy of the Smithsonian Institution developed the idea of "debt for nature" swaps. For example, in 1988 the World Wildlife Fund bought $1 million worth of the Ecuadoran debt. In exchange, wildlife preserves and national parks are protected and maintained.

21. SUSTAINABLE DEVELOPMENT

Introduction:

The concept of sustainable development is one of the most important global themes of the 1990s. Development experts learned some difficult lessons in the 1960s and '70s. Projects often failed because of resistance from the local community or unanticipated effects on the environment. Sustainable development takes a longer view, involves grassroots participation, and emphasizes protection of the environment. In this lesson students select projects that fulfill the criteria for sustainable development. The lesson would be a good follow-up to the lesson on poverty (Lesson 20).

Objectives: Students will be able to:

1. Define the concept of sustainable development.
2. List criteria for sustainable development projects.
3. Evaluate suggested projects using the criteria established.

Time Required: 1 class period

Materials and Preparation: You will need to make copies of Handout 21-1 for all students. If you want to have students do the **Follow-up** activity, you will need brochures or other materials on aid projects by the U.S./your government, U.N. agencies, the World Bank, and/or private organizations.

Procedure:

1. Explain to or remind students that development projects are one possible solution to the problem of world poverty. Some development projects are designed to educate people so they are aware of new ideas, such as sanitation techniques that improve health or agricultural techniques that improve crop yields. Other projects are designed to start new businesses in countries where unemployment is high. Still others involve building a country's infrastructure—roads, dams, power lines, etc. Early development projects were often based on the assumption that with knowledge, technology, and money, a less developed country could easily become a more developed country. Ask students to speculate on why this might have been a false assumption.

2. Distribute copies of Handout 21-1. Instruct students to read the definition and paragraph explaining the concept of *sustainable development*. Have them identify five criteria for sustainable development found in the reading. Explain that criteria are standards by which to judge, or evaluate, something. The criteria may be written as questions or phrases (e.g., "Does the project use natural resources wisely?" or "Must be equitable to all groups.").

Developed by Heidi Hursh and Jonathan Fore.

3. Review the criteria listed by the students. Make sure that they include these points:

- Is the project equitable to all groups in the community?
- Does the project use natural resources wisely?
- Does the project include grassroots decision-making?
- Will the project continue after the money and expert help leave?
- Does the project protect the rights of future generations?

4. Direct the students to the last part of Handout 21-1. Demonstrate, using the first example, how to apply the criteria to project descriptions and decide whether or not the project represents sustainable development. Allow time for students to complete the handout.

5. Check student answers, encouraging them to use the criteria to explain their decisions. Projects 1, 3, and 4 are the best examples of sustainable development. Use these questions to debrief:

- How does sustainable development change the relationship between the local people and outside development experts?
- Does sustainable development depend heavily on technology?
- What other global issues are involved in sustainable development.

Follow-up:

Have available a collection of brochures and program descriptions of assorted aid projects by the U.S./your government, the World Bank, U.N. agencies, and/or private nongovernmental organizations (NGOs). Ask students to examine the materials and to identify examples of sustainable development projects.

SUSTAINABLE DEVELOPMENT: KEEPING THE BALANCE

> *"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."*
>
> Brundtland Commission, 1987*

Sustainable development is an important global theme for the 1990s. In the past, many development projects did not last. They were short-term successes, but after a few years, the people were no better off than before. By taking into account the physical and cultural environment, sustainable development establishes projects that do not deplete the natural resources of an area and that involve people in decision-making at the grassroots level. After the money and experts have left, the people of the local community will be able to continue the project. Sustainable development is also equitable. It does not serve the needs of any one group in the community over other groups or buy benefits for this generation at the expense of the next generation.

Read and discuss the definition. List five specific criteria for sustainable development:

1.____

2.____

3.____

4.____

5.____

---

*National Council of Returned Peace Corps Volunteers, March 1993, p. 3.

Projects:

Classify each of the projects below based on the criteria for sustainable development. Be prepared to explain reasons for your decision.

	Sustainable Development	Not Sustainable Development
1. A young man gets a scholarship to an agricultural college. He must return to his village for at least five years after he finishes college.		
2. A farmer with a 50-acre farm gets a harvesting combine with a low-interest government loan.		
3. Women are given classes in sanitation and family planning by a woman born in the village. She has completed a five-week training course.		
4. Farmers are taught how to raise trees and food crops together so that they can have food while the trees mature, then harvest and sell the trees a few at a time.		
5. Land is cleared for an experimental cattle ranch run by experts from North America. The ranch employs a number of men from the local area.		

V. STUDYING GLOBAL HISTORY

Understanding global systems and global issues demands some knowledge of the historical conditions and events that led to the current world situation. In addition, it is useful for students to see that the world connections so much a part of our lives today began centuries ago. The first activity focuses on the idea that events in one part of the world have had far-reaching effects in other parts of the world. The following four activities look at four topics that illustrate historical connections—language (Activity 23), spices (Activity 24), other agricultural products (Activity 25), and conflict (Activity 26). Because so much of global studies seems to focus on issues and problems, the final activity examines what historian Barbara Tuchman has identified as humankind's "better moments." Special attention is given to research skills and the use of timelines in this section.

22. HISTORICAL RELATIONS

Introduction:

Too often, we think of linkages between regions of the world as being of recent origin. Although it is true that advances in technology make linkages ever more common, parts of the world have been connected for centuries. This activity is designed to help students identify relationships between events in several parts of the world.

Objectives: Students will be able to:

1. Explain that world regions have been linked for many years.
2. Give examples of events in one part of the world that had effects in other parts of the world.

Time Required: 1 class period

Materials and Preparation: You will need to make several sets of the cards provided with this lesson; each set of cards should be cut apart, shuffled, and placed in an envelope.

Procedure:

1. Ask students to give examples from current events of occurrences in one part of the world that have effects in other parts of the world. Do they think such "ripple effects" are a recent or longstanding phenomenon?

2. Explain that while advances in technology have increased the numbers and complexity of interconnections among parts of the world, even in the past events in one part of the world could influence events in other parts of the world.

3. Divide the class into groups of three students. Give each group a set of the cards provided with the lesson. Ask them to sort the cards into groups of related events. To help them, three of the cards have capital letters on them. Each of these cards can be the starting point for one group of events.

4. Allow time for students to do the card sort. Debrief the activity by going over their groupings and asking them to explain how the events in each group are related. The most likely groupings are indicated by the grouping of the cards on the teacher's master; however, other groupings students can justify should be accepted. Be sure to point out in the discussion that one event usually is not the sole cause of another event, but may be one of several contributing causes.

Activity developed by Laurel R. Singleton.

Follow-up:

Students might enjoy examining *The Timetables of History: A Horizontal Linkage of People and Events*, 3rd. rev. ed., by Bernard Grun (New York: Touchstone Books, 1991). This book shows concurrent developments/events in history and politics, literature and the theater, religion and philosophy, visual arts, music, science and technology, and daily life.

Fact Cards

A.

Ship builders design a new ship that can sail into the wind (around 143).

Columbus makes the first voyage to the Americas, searching for shorter route to Asia (1492).

Ancient civilizations of Incas and Aztecs are destroyed by Spanish conquistadors (1519-1571).

Demand for slave labor in American colonies increases slave trade; entire African villages are destroyed (1600-1700).

B.

Native Americans cultivate potatoes, corn, and other crops.

Europeans learn to grow potatoes, corn, and other crops from Native Americans (1600).

European nations become dependent on these staples to feed rapidly growing populations (1800).

Plant disease wipes out Irish potato crop; 750,000 Irish die (1840). United States and Canada experience large increases in Irish immigration (1840s-1850s).

C.

Chinese invent paper (100 A.D.).

Sophisticated Chinese culture expands and begins trading with other cultures in Asia and the Middle East.

Moslems expand their empire beyond Middle East, into Spain (600s).

Europeans learn about paper from Moors (Moslems) in Spain (early 1100s).

Books became more readily available to wealthy Europeans (1200-1400); when movable type (also invented in China) is introduced in Europe (1450s), books become widely available, fueling the Renaissance.

23. THE FAMILY TREE OF A LANGUAGE

Introduction:

Languages provide clear evidence of contacts between cultures. The world's approximately 3,000 languages can be categorized into groups of languages that had a common beginning. In this worksheet activity, students are introduced to the family tree of the English language.

Objectives: Students will be able to:

1. Identify the language family to which English belongs.
2. Explain briefly the ways in which English has developed through intercultural contacts.
3. Give examples of English words borrowed from other languages.

Time Required: 1 class period

Materials and Preparation: You will need copies of Handout 23-1 for all students. Students will also need access to a world map.

Procedure:

1. Ask students to estimate how many languages are spoken in the world today. After several guesses have been made, explain that the correct answer is approximately 3,000. The number of people who speak a particular language varies from a few hundred to approximately 610 million people speaking Mandarin, a form of Chinese. About 275 million speak English.

2. Explain that languages can be divided into families. What do students think a language family is? (A group of languages having a common beginning and similarities based on that common beginning.) English is part of the Indo-European language family.

3. Ask students to speculate on how languages spread. For example, why is English spoken in the United States, Portuguese in Brazil, and Spanish in most of the rest of South America? Also ask students to think about the ways in which languages change over time. Some of these ways are through changes in meaning, spelling, and pronunciation; development of dialects or local forms of language, particularly in areas isolated from other cultures; and addition of new words and dropping of old words.

Activity developed by Laurel R. Singleton.

4. Tell students they are going to complete an exercise on the family tree of English and how English developed over time. Distribute Handout 23-1 and allow time for students to complete the exercise. Go over the worksheet with students. For your convenience, possible answers are provided below:

1. Germanic; Dutch-Flemish and German
2. Romance
3. Balto-Slavic
4. Greek, Armenian, and Albanian; Albania is geographically isolated by water and mountains, so once the language developed it was difficult for it to spread and change.
5. Scandinavian
6. The United States was colonized by Great Britain; settlers brought the English language to the area.

5. Conclude the activity by discussing with students how English became the language of so many people in various part of the world.

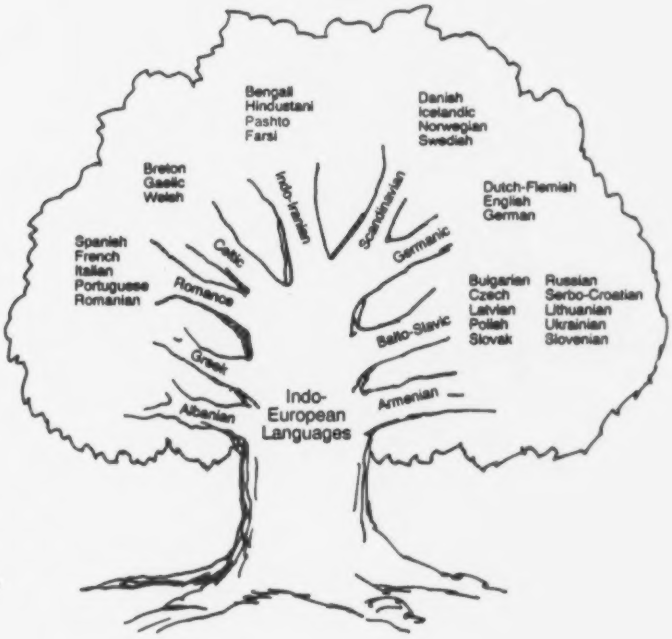
Follow-up:

1. Invite a British, Australian, or Canadian person to visit your class and explore with your students the differences between English as spoken in his/her home country and English as spoken in the United States.

2. Send students on a dictionary scavenger hunt, asking them to find one English word derived from each of the following languages; French, German, Greek, Italian, Latin, Scandinavian, Sanskrit, and one other language of the student's choice.

3. Students may enjoy reading *Talk About English: How Words Travel and Change*, by Janet Clausner (New York: HarperCollins, 1990). This book focuses on the origin and evolution of English vocabulary.

THE FAMILY TREE OF ENGLISH


Bengali
Hindustani
Pashto
Farsi
Danish
Icelandic
Norwegian
Swedish
Breton
Gaelic
Welsh
Dutch-Flemish
English
German
Spanish
French
Italian
Portuguese
Romanian
Indo-Iranian
Scandinavian
Celtic
Germanic
Romance
Bulgarian
Czech
Latvian
Polish
Slovak
Russian
Serbo-Croatian
Lithuanian
Ukrainian
Slovenian
Balto-Slavic
Greek
Armenian
Albanian
Indo-European Languages

The Indo-European language family probably began near the Baltic Sea many thousands of years ago. The people who spoke this language gradually migrated to other parts of the world. In these other areas, the language changed until it became many different languages.

English got its start in the British Isles. It grew out of a language spoken by Germanic tribes that settled in Britain around 400 A.D. This language was called Anglo-Saxon. Anglo-Saxon contained many words borrowed from Latin as the people who spoke Anglo-Saxon moved across Europe, coming in contact with Romans who spoke Latin. Roman missionaries who came to Britain in the 500s also introduced Latin words into the language.

In the 800s, people from Norway and Denmark invaded parts of England. As a result, some Scandinavian words were added to the English language. In 1066, the Normans, who spoke an early form of French, conquered England. Gradually, French words were added to English. As time has passed, words from still other languages have been added to English.

In the 1500s, the English began to colonize other parts of the world, as did other European nations. In this way, the English language was spread to the United States, Canada, Australia, and New Zealand, where it is still spoken today. People in some parts of Asia, Africa, and Latin America also speak English today because of English colonization, although many also retain their native languages.

1. To what branch of the Indo-European language family does English belong?

   ____

   What other languages are part of this branch?

   ______________________________ ______________________________

2. According to what you read, which other branch of the Indo-European language family probably had the greatest influence on English (remember that Latin was spoken by Romans)?

   ____

3. Which branch of the Indo-European language family includes the most languages?

   ____

4. Which branches include only one language?

   ____________________ ____________________ ____________________

   Find Albania on a world map. How might Albania's location help explain why there is only one language in the Albanian branch?

   ____

   ____

5. Find the Baltic Sea on a world map. Which branch of languages is spoken closest to the area where the Indo-European language family originated?

   ____

6. How did English come to be spoken in the United States?

   ____

   ____

24. THE SPICE OF LIFE

Introduction:

Spices provide a good case study in global history. They provide a link with the past, in that the same spices that were used many years ago are still used today, although the ways in which they are used have evolved. Furthermore, spices were a key factor in the age of exploration, which brought more parts of the world in contact with each other than ever before.

Objectives: Students will be able to:

1. List several spices and how they are obtained and used.
2. Describe historical uses of spices.
3. Explain how spices helped spark the age of exploration.

Grade Level: 2-6

Time Required: 2 class periods

Materials and Preparation: Make copies of Handouts 24-1 and 24-2 for all students. You will also need a wall map of the world. If possible, you may want to bring samples of some spices for students to examine.

Procedure:

1. Tell students you are going to give them clues to a mystery substance (spices). Begin reading the clues below one by one, allowing time for speculation after each:

   - Long ago, I was used to make perfume.
   - Long ago, I was used in embalming fluids, the liquids put in dead bodies to slow the decomposing process.
   - I used to be used in ointments and as a medicine.
   - I was one of the ingredients used in incense, which was burned in churches.
   - I have been used as money.
   - I was used to keep foods from getting rotten.
   - You probably have some of me in your house.
   - Cinnamon, pepper, and ginger are three examples of me.

Activity developed by Laurel R. Singleton.

2. When students have identified spices as the mystery substance, ask if they were surprised by the many uses to which spices have been put. Ask: How do we use spices today? (To give food flavor) Ask students to speculate on how people might have discovered that spices give food flavor. Share with them the theory offered by some anthropologists, who suggest that an ancient human probably wrapped a piece of meat in a leaf to keep the dirt and ashes from the fire pit off the meat; when the meat was eaten, it tasted better.

3. Explain that spices can be made from the seeds, leaves, bark, flower buds, berries, and roots of plants. Distribute Handout 24-1, which provides examples of spices made from various parts of plants, along with some information about their use. Ask students to find out how many of the spices shown on the handout they have in their homes.

4. At the beginning of the next class period, allow time for students to share the result of the "spice-rack inventory." If possible, you may want to have a sample of each spice available for students to smell and taste.

5. Distribute Handout 24-2 and have students identify the six popular spices and where they were found. Ask students to speculate on why the location of these spices might have been important in world history.

6. Share the following information with students, using a world map to illustrate the story. Students may want to add some of the information to their Handout 24-2 maps.

Many years ago, Arabs controlled the spice trade in the Middle East and Europe. They took huge caravans of camels—as many as 4,000—across land to western India. Here, they bought spices from the Indians and from Chinese traders who had journeyed there. They then returned to the cities of Nineveh, Babylon, and Alexandria with the spices. From Alexandria, the spices were shipped to Europe.

Getting the spices took a long time and was very hard work, but the demand for spices was high. Because there were no refrigerators at that time, people often had to eat spoiled meat. Spices could keep meat from spoiling and could also hide the bad taste of rotten meat. The high demand and the fact that the spices were hard to get made them very expensive. Only rich people could afford to buy them.

Spices could be traded for other goods. For example, if you had a pound of ginger, you could trade it for a sheep.

The Arabs had never told people in Europe where they got the spices. Everything changed when a young man named Marco Polo traveled to Asia in 1271. He discovered that spices came from Cathay (the old name for China) and other areas in Asia. He returned to Europe and told people what he had found.

Explorers began dreaming of finding a water route to the Indies (India, China, Southeast Asia, and Japan). Portuguese sailors began trying to sail around Africa to the Indies. Christopher Columbus thought sailing west would be a shorter route. The race was on!

7. Discuss the information presented with students, focusing particularly on how spices helped spark the age of exploration. Ask students if there is any resource today that is so precious it would cause people to make dangerous journeys into the unknown.

Follow-up:

1. Older students might conduct research to find out which European countries became most involved in the spice trade. They might also find out and map where the six most popular spices of ancient times are grown today.

2. Encourage students to find out what two spices Columbus found in the Americas (allspice and capsicum, a pepper plant). How are these spices used today?

3. Handout 24-3 provides international recipes using cinnamon. If time permits, let students make and sample the recipes. Which do they prefer? Why? What do they think accounts for the popularity of this spice?

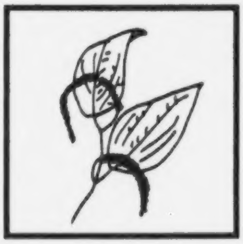
WHERE SPICES COME FROM

Spices can come from many different parts of a plant. Some examples are given below.

Berries

Pepper is an example of a spice made from berries. Peppers grow on vines. The berries are found in clusters of as many as 50 berries. When a pepper berry has been dried, it is called a peppercorn. Peppercorns are ground to make the pepper we sprinkle on our food.

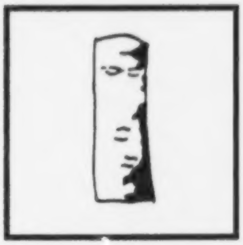
In olden times, pepper was the most valuable spice. It was often used as money. Even today, pepper is used in unusual ways. For example, people in France sprinkle pepper on their carpets to keep moths out.



Bark

Cinnamon is made from the bark of the cinnamon laurel tree. The bark of a tree (it must be at least six years old) is cut and peeled off. As it dries, it curls up into long sticks. The sticks are ground up into powder.

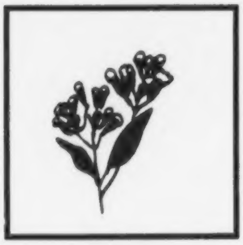
Long ago, cinnamon was often given as a gift to a king or other important person. It was sometimes burned at religious ceremonies. Romans took baths in cinnamon water. It is used as a flavoring for everything from bread to fruit to tea.



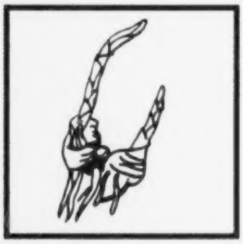
Flower Buds

Cloves are made from the flower buds of the clove tree. The buds are picked before they are open. They are reddish but dry into a dark brown. Dry cloves look like small nails.

Ancient Chinese people put cloves in their mouths before talking to the king. The cloves made their breath smell good. Oil of cloves was used to ease the pain of a toothache. Today cloves are used with such foods as baked hams, squash, and desserts; cloves are also used in ketchup.



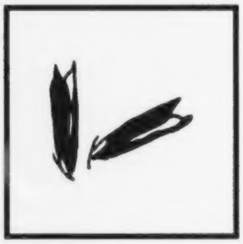
Roots



Ginger comes from the root of a ginger plant. The plant must grow for about a year before the roots can be used. After the plant is dug up, the roots are washed and dried. They can be used whole, cracked, or ground.

This spice has been used to make gingerbread for as much as 5,000 years. It was almost as valuable as pepper. It was the first of the Asian spices to be grown in the Americas.

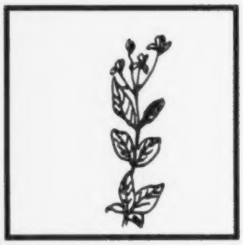
Seeds



Sesame seeds are small white seeds from a plant that grows in warm climates. The seed is sold whole and untoasted.

Sesame seeds were an important food for Greek and Roman soldiers on their long marches. Today they are used on breads and rolls, as well as in sweets.

Leaves



The marjoram plant grows about two feet tall. Its grayish-green leaves are used to flavor stews, soups, and meats.

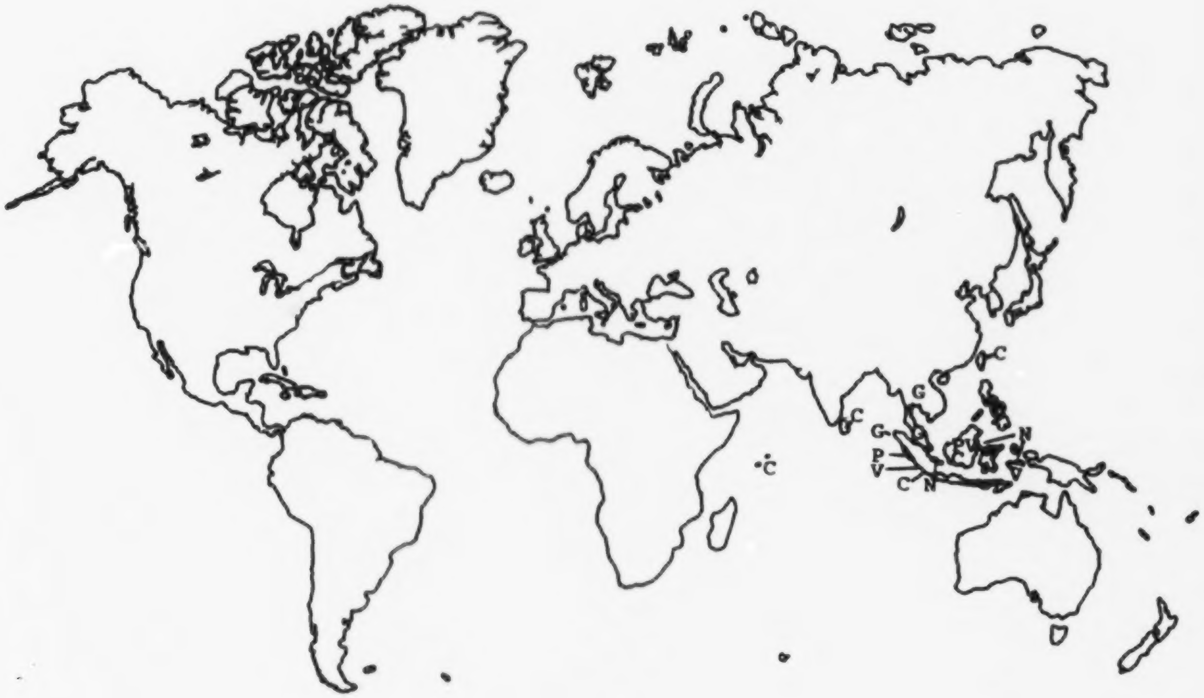
Marjoram is a symbol for love. It has been used in perfumes and as a medicine. It is even said that Venus created marjoram to heal a wound caused by Cupid's arrow.

THE SIX MOST POPULAR SPICES

The six most popular spices long ago were pepper, cinnamon, nutmeg, mace, cloves, and ginger. The map below shows where these spices were grown. What do you notice about where the spices were grown? Why would this be important?

Key

pepper—P
cinnamon—C
nutmeg and mace (from same plant)—N
cloves—V
ginger—G



SNICKERDOODLES (United States)

Makes about 3 dozen cookies

Ingredients

3 cups all-purpose flour
1/2 t. salt
3/4 t. baking soda
1 cup soft butter or margarine (2 sticks)
1 1/2 cups sugar
1 t. vanilla
2 eggs
1/4 cup milk
1 T. butter for cookie sheets

For Topping: 3 T. sugar
3 T. cinnamon

Directions

1. Preheat oven to 375°F.
2. Put the butter or margarine into a large mixing bowl and cream it well. Then add the sugar, a little at a time, beating until smooth. Stir in the vanilla.
3. Add the eggs to the butter and sugar mixture.
4. Add the milk and the dry ingredients. Stir to combine.
5. Combine the sugar and cinnamon for the topping in a small bowl.
6. Grease 2 cookie sheets.
7. Drop large teaspoonfuls of dough onto the greased cookie sheet about 1 inch apart. Use your finger or another spoon to get the dough off the teaspoon. Sprinkle the tops of the cookies with cinnamon and sugar.
8. Bake about 10 minutes until cookies are brown around the edges.
9. Remove from oven and loosen cookies from sheets while still warm.

SURPRISE RICE PUDDING (Sweden)

Ingredients

3 T. butter
1 cup rice
3/4 cup water
1 qt. milk
1 cinnamon stick, or 1 t. cinnamon
4 T. sugar
1/4 t. salt
1 t. vanilla
1 whole almond

Directions

1. Melt the butter in a saucepan. Add the rice and water. Bring to a boil and cook, stirring, for about 5 minutes.

2. Add the milk, cinnamon, sugar, salt, and vanilla.

3. Simmer for about 20 minutes, stirring every few minutes. Be careful not to let the milk boil over.

4. When the milk is almost gone and the rice is soft, turn off the heat and stir in the almond. Pour into a serving bowl and serve warm.

GROUNDNUT CRUNCH (Tanzania)

Ingredients

1/4 lb. unsalted peanuts
1/3 cup water
1/3 cup sugar
1/2 t. cinnamon

Directions

1. Shell the peanuts and chop them fine.
2. In a heavy-bottomed saucepan, heat the water and sugar over low heat, stirring constantly until the sugar dissolves.
3. Add the peanuts and cinnamon and continue stirring for about 3 minutes, until the sugar turns light brown. Be careful that the mixture doesn't burn.
4. Remove the pan from the heat and let cool about 10 minutes, until cool enough to handle but still soft.
5. Pick up bits of the mixture and shape into 1-inch balls. Place on waxed paper until set.

25. POTATO POWER:
HOW ONE FOOD CHANGED THE WORLD

Introduction:

The potato, first cultivated in the Andes in what is now Peru, was a staple crop throughout a large portion of the Americas before 1492. Although potatoes did not catch on quickly when introduced in Europe, their eventual adoption as a staple crop had a significant impact on history. In this lesson, students explore the history of the potato, as well as the reasons for its importance.

Objectives: Students will be able to:

1. Explain the origin and spread of the potato.
2. Describe the advantages the potato offers as a staple food crop.
3. List reasons why the potato had an important effect on world history.

Time Required: 2 class periods

Materials and Preparation: You will need copies of the cards provided with the lesson for every two to three students; each group will also need an outline map of the world. You will also need to make copies of Handout 25-1 for all students.

Procedure:

1. Tell the students that an anthropologist named Jack Weatherford wrote the following sentences about an important item in history. Then read this quotation aloud to the class:

> Without the [blank] the Soviet Union might never have become a world power, Germany would not have fought two world wars, and northern Europe and the Benelux countries would not have one of the world's highest standards of living.

Ask students to suggest what word they think goes in the blank. At first accept all answers. Then focus students' thinking by telling them that the correct answer is a food. Again, allow them to speculate. If no one suggests potato, tell them that Weatherford was referring to the potato.

Developed by Laurel R. Singleton. The lesson was inspired, in part, by a lesson in *Seeds of Change*, by James E. Davis and Sharryl Davis Hawke (Menlo Park, CA: Addison-Wesley, 1992) and Chapter 4, "The Food Revolution," in *Indian Givers: How the Indians of the Americas Transformed the World*, by Jack Weatherford (New York: Fawcett Columbine, 1988).

2. Next, ask students to hypothesize about where the potato was first grown. Based on the above quotation, they may be likely to suggest Europe, although those who know about the agricultural expertise of the Native Americans may suggest that the potato was first grown in the Americas—and they would be right. In fact, the potato was first grown about 4000 years ago in the Andes Mountains in what is now Peru.

3. Tell students that they are going to create maps showing the history of the potato. Organize the students into groups of two or three students and give each group a set of cards and an outline map. Ask students to find the card that presents the information about the origin of the potato that they just learned. Tell students to attach the card to the appropriate place on their maps. Direct them to arrange the rest of the cards in chronological order and continue adding them to the map in the appropriate locations. Some of the cards may merit individual discussion.

- By the early 1500s, the Andeans were growing 3,000 varieties of potatoes. Colors ranged from white and yellow to purple, red, orange, and brown. Rather than changing the environment, the Andeans apparently worked to develop new plant strains to suit different conditions, including different amounts of rainfall, different soils, and different growing seasons.
- Potatoes were freeze dried for later use. This actually occurred in the mountains of Peru before contact with Europeans. According to Weatherford, the Andean farmers put their potatoes outside in the high mountains at night. The following day, the sun would thaw out the potatoes. The farm family would then walk on the potatoes to press out the moisture. This process would be repeated for several days until the potato looked like a piece of plastic foam. Potatoes in this form could be stored and saved for up to five years. When needed, the potatoes would be soaked in water and cooked or ground into meal.
- When first introduced in Europe, the potato did not gain widespread acceptance. Europeans did not eat many root crops, and many actually hated potatoes. The odd shape of the potato even gave rise to a legend that potatoes caused leprosy.
- Far fewer famines occurred following introduction of the potato as a staple crop. Even in the southern European countries with longer growing seasons and thus better diets, famines were common. France, for example, had 16 famines as late as the 18th century.

4. When the students have completed their maps, ask them to identify some of the ways in which the potato affected history. Point out that the potato alone is not responsible for the increase in population in Europe. Many other crops developed by the Native Americans were introduced in Europe and other places around the world. However, the potato was one key element in population growth, especially in Ireland, where population tripled in the 100 years following acceptance of the potato as a staple crop. You may also want to point out that had the Irish grown more varieties of potatoes, the potato famine might not have been so serious, since some varieties probably would have been resistant to the blight.

5. Ask students to speculate on why the potato's impact was so great. Distribute Handout 25-1 and discuss the various benefits that the potato offers, both to farmers and to consumers.

6. To conclude the activity, ask students to write a paragraph or draw a picture showing how the potato illustrates the idea that various parts of the world have been linked throughout history.

Follow-up:

1. If your students have studied the issue of biodiversity during the year, you may want to discuss the potato in that light. Why didn't the Europeans grow more varieties of potatoes like the early Native American farmers did? How might history have been different if they had grown more varieties? Then ask students to consider the following scenario:

Imagine that a new food crop has been developed in South America. It is a very reliable crop that can be grown in drought conditions. It is also a good source of protein. Thus, it might solve the food-supply problems in drought-stricken areas of Africa. The other parts of the plant also have medicinal value. However, when the plant is introduced in an area, it tends to spread rapidly, taking over areas where native plants now grow. Should this crop be introduced in Africa? In the Southwestern United States? Why or why not? Ask students to write brief essays presenting their thoughts on these questions.

2. Many of the food crops we eat today were originally developed and cultivated by Native American farmers. Encourage students to research the history of other crops, such as corn (maize), squash, cassava, beans, and tomatoes.

3. Some students might also explore uses of the potato today. What countries are the largest consumers of potatoes today? In how many different kinds of foods is the potato used?

Fact Cards

Potatoes were first grown in the Andes Mountains in what is now Peru about 4000 years ago.

By 1500, the Andeans were growing 3,000 different kinds of potatoes.

Potatoes were freeze dried for later use.

By the time the Spanish arrived, the potato was being grown as far north as the southwestern United States.

The potato was introduced in Ireland in the late 1500s.

By the late 1600s, the potato became Ireland's most important food crop.

When first introduced into the rest of Europe, the potato was not widely accepted.

Far fewer famines occurred in the 1800s. Nutritional diseases also declined.

Following several famines in the 1700s, European rulers forced farmers to plant potatoes. By the mid 1800s, the potato had become popular in Germany, Eastern Europe, and Russia.

Population in Europe grew rapidly in the 1800s.

In the late 1800s, better-fed armies from Prussia and Russia take on armies of Spain and France, which had previously been more powerful.

Blight hits the Irish potato crop in the 1840s. Widespread famine occurs.

Many Irish families migrate to North America.

Today, farmers in North America grow as many as 250 varieties of potato. However, 20 varieties account for 75 percent of the harvest.

Today, scientists at the International Potato Institute in Lima, Peru, study the potato and save seeds from the thousands of varieties of potatoes that have been grown in the Andes.

POTATO POWER

- The many varieties of potato allowed it to be grown in different climates. Thus, each country in Europe could find a variety of potato well suited to the length of its growing season and the amount of moisture received.
- A field of potatoes produces more food more reliably and with less work than the same field planted in any grain.
- A one-hectare field of potatoes produces 7.5 million calories. The same size field of wheat produces 4.2 million calories.
- Potatoes have a shorter growing season than most grains. Potatoes can also grow in soil that will not support grains.
- Potatoes require less work by farmers. They do not have to be milled or processed as grains do.
- Potatoes can be cooked in a variety of ways—baked, boiled, roasted, or fried. They can be used in many different dishes—soups, dumplings, pies, souffles, pancakes, and breads.
- Potatoes can be stored in a cellar and eaten throughout the winter. They provide vitamin C in the winter, when it was once hard for people in northern countries to get vitamin C.
- People who eat a diet made up of mostly grains get more cavities than people who eat lots of potatoes. Better teeth improve overall health.

26. THE NOBEL PEACE PRIZE:
CONFLICT IN THE 20TH CENTURY

Introduction:

The Nobel Peace Prize was first awarded in the first year of the 20th century. Ironically, learning about the winners of this award tells us more about conflict in this century than peace, but it also teaches about the commitments of individuals to noble causes, even in the face of seemingly insurmountable odds. This lesson, in which students create a living timeline, is designed to help students identify areas of conflict in the 20th century and the values that prompted Nobel Peace Prize winners to work to resolve these conflicts and prevent others.

Objectives: Students will be able to:

1. Identify the values underlying the Nobel Peace Prize.
2. Describe the work of at least five Nobel Peace Prize winners.
3. List at least five areas of conflict in the 20th century.
4. Make inferences about how and why the Nobel Peace Prize has changed since its inception.

Time Required: 1-2 class periods

Materials and Preparation: You will need one copy each of the Role Cards and Narration. You may want to select a student to be the narrator the day before you plan to teach the lesson so he/she can read through the Narration in advance (as an alternative, you may choose to be the narrator yourself). Place placards saying 1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970, 1980, 1990, and 2000 in order around your classroom walls. If you wish to do the optional mapping activity, you will also need a large world map and several colors of push pins.

Procedure:

1. Ask students if they have heard of the Nobel Peace Prize. Post all the information students are able to generate on the chalkboard. Tell students they will be able to check the accuracy of this information during today's lesson.
2. Share the following story with the class:

Activity developed by Laurel R. Singleton.

Alfred Nobel was born in 1833 in Stockholm, Sweden. He was a quiet boy who went to formal school for only one year. After Alfred completed first grade in Sweden, the family moved to Russia and Alfred never went back to school, although he was tutored until he was 16. Alfred was a smart boy, though somewhat sickly. Like his father, Alfred was an inventor. By the time he was 30, Alfred had invented the blasting cap, which allowed obstacles to be blown out of the paths of the workers constructing railroads and canals across the continents.

But nitroglycerin—the main explosive then in use—was still very dangerous, and an explosion in the Nobel family laboratory in Sweden (where the family had returned around 1860) killed five people, including Alfred's youngest brother. This was not the only accident involving the Nobels and nitroglycerin. In 1866, the family's factory in Germany was destroyed, and many lives were lost. But Alfred was ready with another invention—dynamite, an explosive that was easier and safer to work with. Nobel's explosives business grew rapidly; by 1873, he had four factories and subsidiaries in many countries.

Alfred continued inventing things. He went on to develop two other explosives—gelignite and ballistite. While most of Nobel's inventions had been developed for use in engineering projects, ballistite was developed for use in war. It was a smokeless explosive powder that allowed heavy weapons to keep up prolonged bombardment; this invention made possible the warfare of World War I. In the 1880s, Nobel worked on various improvements to weapons.

When Nobel died in 1896, his will came as a surprise to many people. After leaving money to various relatives, friends, and employees, Nobel directed that the rest of his money be used to set up a fund. The fund was to be invested, and the interest earned was to be used to give annual prizes to those making achievements in physics, chemistry, medicine or physiology, literature, and "to the person who shall have done the most or the best work for fraternity among nations, for the abolition or reduction of standing armies, and for the holding and promotion of peace congresses." Nobel said that the peace prize should be awarded by a committee of five persons chosen by the Norwegian Storting (Congress); the other prizes were to be awarded by various Swedish groups.

The will caused a great deal of controversy. Swedes did not see why the Norwegians had been picked to give the peace prize. They wondered why Nobel was giving international prizes rather than Swedish prizes. Some people claimed that if Nobel had not been interested in the good of all while he was alive, giving these prizes after he was dead was hypocritical. There were also legal problems. Eventually, all the problems were solved, and the prizes began to be awarded.

The winner of the peace prize is picked by a committee of five people appointed by the Norwegian Storting. People from around the world are asked to nominate, or suggest, possible winners. The committee then sifts through all the information provided and selects a winner. Some years, it has decided not to award a prize.

The prize, given on December 10 (the anniversary of Nobel's death) each year, consists of a gold medal, a diploma, and a sum of money.

3. Allow students to comment on the story. Ask them to speculate on why someone who made a fortune selling explosives would institute a prize for peace. What value does the prize represent? Tell students they are going to learn about the work of some of the winners of the prize. They will do this by creating a living timeline.

4. Distribute the Role Cards and allow students time to read through their cards. Explain that the narrator will tell a little about the awarding of the prizes in each decade and the winners from that decade will then stand in the appropriate place around the classroom and explain their work. Once they have make their presentations, they should remain standing on the timeline. (Depending on the number of students in the class, some students may need to read two cards.) If time permits, you may want to give students in each decade a different color of pushpin and allow them to mark areas of conflict they can identify from the descriptions of their winners' work on a large world map.

5. Before students begin the living timeline, tell them to look for the following information as they listen to their classmates—the areas where conflict has occurred, the kinds of conflict, and how the prize has changed over the years. Point out that these are only some of the winners and that not every conflict that has occurred is represented by these winners (or in fact by all the Nobel Peace Prize winners).

6. Allow time for students to present the living timeline. Debrief the activity by discussing the following questions:

- What values did "your" winners work for or represent?
- In what decades were winners most likely to be pacifists, organizers of peace conferences, or experts on international law and arbitration?
- When were the efforts of the League of Nations recognized? When was it replaced by recognition of the United Nations?
- Do you think it is appropriate for the prize to be given to an organization, such as the Red Cross, whose premise is that war is inevitable?
- When did the prize begin to recognize the well being of developing nations?
- Tony Gray, an author, said that writing a book on the Nobel Peace Prize winners was "depressing" because we "have come so far" and "learned so little." What do you think he meant by this? Do you agree?

Follow-up:

1. Have students continue adding to the map, using information from newspapers, magazines, and television.

2. Encourage students to make posters illustrating the work of "their" Nobel laureates to turn the living timeline into a visual one.

3. Possible subjects for additional research include other winners of the Peace Prize or the other Nobel prizes. What values do they reflect? What do they demonstrate about global history in the 20th century?

Narration

The years from 1901 to 1910 saw remarkable scientific and technological advances. In 1901, a scientist for the first time separated uranium. That same year, Marconi sent a message from England to Canada by wireless telegraphy. In 1903, the Wright brothers became the first humans to fly, and in 1905, viewers enjoyed the first motion picture.

1901 was also the first year in which the Nobel Peace Prize was awarded. During the prize's first years, the committee gave the award to people who had been active in peace societies, or who had worked to establish international law or methods of arbitrating or resolving international conflicts.

(Pause for winners in 1901, 1905, and 1912)

While the Nobel Peace Prize's second decade began with the committee awarding the prize to individuals similar to those who had won in the first decade, the world was changing. The years from 1910 to 1919 were years of conflict; there were revolutions in Portugal, China, Mexico, and Russia, among others. The biggest conflict was, of course, the First World War, or the Great War as it was called at the time.

During the war, the Peace Prize was awarded only one year—it was not awarded in 1914, 1915, 1916, or 1918. After the war, the committee's attention shifted to those who worked to alleviate the effects of the war and to those instrumental in establishing the League of Nations, an international organization dedicated to preserving peace.

(Pause for winners in 1917, 1919, and 1922)

During the 1920s, Stalin and Mussolini rose to power in their nations, and Hitler began his climb to the top in Germany. There was conflict in Ireland, India, and Palestine, among other places. Near the end of the decade, the stock market crashed, bringing many to financial ruin and signaling the significance of the worldwide economic depression.

As the 1930s opened, with Europe still not completely recovered from World War I, conflict continued in places as farflung as India, Ethiopia, Palestine, and Finland. Before the decade was out the League of Nations had collapsed, and war had broken out in Europe. On the scientific front, Joliot had shown that the atom of uranium isotope 235 could be split, an important step toward the development of atomic weapons.

(Pause for winners in 1930, 1931, 1935, and 1936)

The 1940s were, of course, the years of World War II. Fighting engulfed nearly the entire globe; the war ended with the first use of atomic weapons at Hiroshima and Nagasaki in Japan. But the end of World War II did not bring an end to conflict. Indeed, there has not been a day since World War II ended that there has not been armed conflict somewhere in the world. In the late 40s, this conflict was seen in China, in the Middle East, and in many other locations. The 1940s also saw the beginning of the apartheid program in South Africa, the withdrawal of the non-Communist or Chinese Nationalists to Formosa, and the establishment of Israel as a nation.

During the 1940s, as in other times of war, the Nobel Peace Prize committee awarded no prize for several years. After the war, the committee focused on individuals active in establishing the United Nations and putting its goals into operation.

(Pause for winners in 1945, 1949, and 1950)

In the 1950s, conflict intensified in Korea and continued in such other locations around the globe as the Middle East and Africa, where Africans sought to gain their independence from colonial powers. Tension between the United States and the Soviet Union was high; the situation between the two was dubbed the "Cold War."

The Nobel Peace Prize Committee—and some of the winners—seemed disillusioned with the hope for world peace, but it continued to award the prize to individuals in efforts to heal the wounds cause by World War II and keep the United Nations operational.

(Pause for winners in 1952 and 1957)

People in the United States may best remember the 1960s as the years of civil rights protests, American involvement in Vietnam and related protests, the space program, and the assassinations of the Kennedy brothers and Dr. King. But the 1960s also saw major independence movements in Africa, violent protests against apartheid, increasing conflict in Northern Ireland, upheaval in China, Arab-Israeli wars, and the invasion of Czechoslovakia by the Soviet Union.

During the 1960s, the Nobel Peace Prize committee began to change the nature of the prize, a change that has persisted to the present. Many of the recipients in the past 30 years have been individuals working for human rights or for the betterment of the lives of people in impoverished countries. By the mid-1970s, the committee had awarded the prize to individuals working for limitations on nuclear weapons.

(Pause for rest of winners)

1901

I am Henri Dunant, a Swiss. I founded the International Red Cross Society. My selection for the 1901 prize was controversial, as many people felt the Red Cross, which works to lessen the effects of war, accepted war as inevitable. I was a religious person, who witnessed the horrors of war in the Franco-Prussian war in the 1850s. That experience prompted me to start the Red Cross to provide care for the wounded in time of war. I also worked to get humane treatment for prisoners of war.

I am Frederic Passy, a Frenchman who shared the 1901 prize. I founded the International and Permanent Peace League and was one of the founders of the Interparliamentary Union. My work for peace began during the Crimean War in 1853. Many people believed my pleas for peace helped prevent war between France and Prussia in 1867. The idea behind the Interparliamentary Union, established in 1889, was to bring together members of the parliaments of all countries to discuss issues and explore ways of cooperating.

1905

I am Bertha von Suttner, the winner of the 1905 prize. An Austrian, I was the first woman to win the prize. I worked briefly as Alfred Nobel's secretary and corresponded with him later. Although I was the founder of the Austrian Peace Organization and attended many international peace meetings, I was perhaps best known for my writings. My novel *Lay Down Your Arms* was widely read. I was also the editor of a peace journal. In that position, I wrote against the use of humans' finest instincts—self-sacrifice and a belief in fighting for justice—to support bad policies rather than to work to end war. Although I died before World War I, I foresaw how the airplane could come to be used in war and warned against it.

1912

My name is Elihu Root. In 1912, I became the second American to win the Noble Peace Prize. I served as secretary of war under President McKinley and was responsible for organizing affairs in Cuba and the Philippines after the Spanish-American war in 1898. As secretary of state under Theodore Roosevelt, I traveled to South America to develop better understanding between our nation and the nations of that continent. I also negotiated many treaties and made sure they were approved by the U.S. Senate. I was the government official who negotiated a "Gentlemen's Agreement" with Japan to limit Japanese immigration to the United States. I also persuaded California school officials to let Japanese children already in their state attend public school.

1917

In 1917, the International Committee of the Red Cross received the Nobel Peace Prize. We received the award in recognition of the fine work we did during World War I, on the battlefields and in helping family members locate relatives who were prisoners of war. Because our operation was expensive, the cash award received as part of the Nobel Prize was helpful in funding our work.

1919

I am Woodrow Wilson, 28th president of the United States and winner of the 1919 Nobel Peace Prize. In January 1918, I gave my famous "Fourteen Points" speech, which described a League of Nations to be formed to prevent war and spelled out the foundations of what I hoped would be a lasting peace. These foundations included such features as freedom of navigation and the reduction of arms. In awarding the prize, the president of the Norwegian legislature said "the basic concept of justice on which [the plan] is founded will never die but will steadily grow in strength." And I believed that was true.

1922

My name is Fridtjof Nansen. I am a Norwegian scientist and explorer. I received the 1922 Nobel Peace Prize for my work in helping prisoners of war return to their homelands and for the assistance I gave refugees in Russia and Asia Minor. I was the League of Nations first high commissioner for refugees. I did not have much respect for politicians and diplomats. I believed that only through cooperation between all nations could peace and a better life for all peoples be achieved.

1930

I am Nathan Soderblom, a Swedish churchman. I received the 1930 Nobel Peace Prize, the first churchman to do so. I worked for unity among Christian churches because I believed a united church could be a powerful force in achieving world peace. In accepting the peace prize, I said "the church must uphold the sanctity of law and promote its development in the name of Christ, both inside and outside national boundaries. She must, therefore, fight against all glorification of violence and against any force contrary to the rule of law."

1931

I am Jane Addams one of the winners of the 1931 Prize. Although I was best known as the reformer and founder of Hull House in Chicago, I was also active in the American Women's Peace Party and was the first president of the Women's International League for Peace and Freedom. It was for my peace work that I was recognized by the Nobel committee. I wrote several books; in one, I said, "The things which make men alike are finer and better than the things which keep them apart."

My name is Nicholas Murry Butler. I shared the 1931 prize with Jane Addams. The president of Columbia University in New York. I was active in international groups promoting arbitration. In 1910, I persuaded Andrew Carnegie to establish the Carnegie Endowment for International Peace. I was president of this endowment and active in promoting its work. In a radio speech accepting the award, I said, "might does not make right and war between nations is now as much out of date as the torture chamber and the scalping knife."

1935

I am Carl Von Ossietzky. When I received the 1935 Nobel Peace Prize, I was in a German concentration camp, where I had been imprisoned for publishing articles attacking the German government's actions in rearming the nation. I published those articles as the editor of a journal called the *Berlin People's Paper*. My selection was very controversial. The Germans believed it was an insult to Germany and decreed that no German could accept any future Nobel prize. People in democratic nations felt that the prize should not be awarded to me because I and my group were powerless to change the German dictatorship, which was intent on waging war.

1936

My name is Carlos Saavedra Lamas. In 1936, I became the first South American to win the Nobel Peace Prize. I held many positions in the Argentian government and represented Argentina at every important international meeting during the 1930s. I was responsible for ending the Chaco War and initiated a document called the Declaration of August 1932, which said that nations of the Americas would not recognize any boundary or territorial changes brought about by force. In a radio address accepting the Nobel Prize, I described war as "the useless sacrifice of courage erroneously applied."

1945

I am the winner of the 1945 Nobel Peace Prize, Cordell Hull. I was secretary of state for 12 years. Franklin Roosevelt, whom I served under, called me the "father of the United Nations." It was for my efforts in starting the UN, as well as my work to promote peace, that I received the award. I was too ill to accept the award in person, but my written message of acceptance said, "Triumphant science and technology are only at the threshold of man's command over sources of energy so stupendous that, if used for military purposes, they can wipe out our entire civilizations... I am firmly convinced that, with all its imperfections, the United Nations Organization offers the peaceloving nations of the world a fully workable mechanism which will give them peace, if they want peace."

1949

I am Lord John Boyd Orr of Great Britain. I was a doctor and nutrition expert who won the Nobel Peace Prize in 1949. I believed that hunger in the midst of plenty is one of the main causes of war. Thus, I devoted my life to alleviating hunger in the search for peace. My work was the basis for British food policy during World War II. After the war, I directed the Food and Agricultural Organization of the United Nations. I was also active in several British and international peace organizations. It has been said that my speech in accepting the award was one of the most brilliant ever.

1950

I am American Ralph Brunche, the winner of the 1950 prize and the first black to win a Nobel prize. The grandson of a slave, I specialized in colonial affairs. I worked in the state department and represented the United States at many international conferences in the 1940s. I won the Nobel Peace Prize for my work as UN mediator on Palestine. After 11 long months of negotiation between seven Arab nations and the Jews—none of whom would sit in a meeting together—I obtained an armistice. After that, I was given many special UN assignments in such trouble spots as the Congo, Cyprus, Kashmir, and Yemen. In my acceptance speech, I directed the attention of the West to the Third World, saying "Europe, and the Western World generally, must become fully aware that the massive and restive millions of Asia and Africa are henceforth a new and highly significant factor in all peace calculations. The hitherto suppressed masses are rapidly awakening and are demanding, and are entitled to enjoy, a full share in the future fruits of peace, freedom, and security."

1952

I am Albert Schweitzer of Germany. I won the Nobel Peace Prize in 1952. I did not have one career, for I was an organist, a music scholar, a philosopher, a writer, a pastor, a doctor, and a missionary. I lived for many years in west Africa, where I started a hospital providing medical care for many of the region's sick. I believed strongly in reverence for life and the ideal of brotherhood among all individuals, nations, and races. In accepting the award, I said "only when an ideal of peace is born in the minds of the peoples will the institutions set up to maintain this peace effectively fulfill the function expected of them.

1957

I am Lester Bowles Pearson, the first Canadian to win the Peace Prize. When I was awarded the prize in 1957, I was finishing my career as Canada's foreign minister. I was also the longtime Canadian representative to the United Nations, where I had major responsibility for creating the UN emergency peace-keeping force. This multinational force was first used in 1956, when Egypt, Israel, Britain, and France were fighting over the Suez Canal. The use of UN forces to end this conflict was seen as the UN's first successful peace effort. Unlike most of the other winners of the Nobel Prize, I acknowledged that men like war—its thrill, glamour, and freedom from restraint. I believed people had to be protected against this weakness in order to achieve peace.

1960

I am Albert John Luthuli of South Africa. In 1960, I became the first black from Africa to win the prize. I was also the first winner whose work was concentrated solely on the rights of people within my own country. As chief of my tribe and president of the African National Congress, I led a massive nonviolent protest against racist policies in South Africa. As a result of my activities, I was "banned" (forbidden to attend public gatherings, write for others to read, or travel freely) twice and was imprisoned for nearly a year. In my acceptance speech, I pointed out that there had been little peace in Africa but that a free Africa could serve as a mediator between the East and West.

1964

I am Dr. Martin Luther King, Jr. I received the Nobel Peace Prize in 1964. I was recognized for my work as the leader of the nonviolent movement to achieve black civil rights in the United States. My work began in Montgomery, Alabama, where I led the bus boycott that marked the birth of the civil rights movement. Throughout the course of my work, I traveled more than 6,000,000 miles, gave more than 2,500 speeches, and wrote books and articles. I was arrested more than 20 times and assaulted four times. Deeply influenced by the teaching of Mahatma Gandhi, I explained my views on nonviolence in my acceptance speech: "Nonviolence is a powerful and just weapon. Indeed, it is a weapon unique in history, which cuts without wounding and ennobles the man who wields it."

1968

My name is Rene-Samuel Cassin. Aged 81 in 1968, I was one of the oldest winners of the award. I was a French jurist, delegate to the League of Nations, and government official. However, I won the award for my work in writing the Declaration of Human Rights. Together with Eleanor Roosevelt, I then worked to get the declaration accepted by the UN General Assembly, an effort that took 97 meetings and 1,200 votes. I recognized that the Declaration was an ideal and not a description of actual conditions but I believed it was an important document nonetheless.

1970

I am Norman Ernest Borlaug, a U.S. geneticist and plant pathologist. I received the 1970 prize for my work in developing a type of wheat that was ideal for growing in Third World countries. The Nobel committee said it awarded me the prize "because more than any other single person of his age, he has helped to provide bread for a hungry world. We have made this choice in the hope that providing bread will also give the world peace." In my Nobel speech, I warned the world to beware of the "Population Monster," which could destroy the possibility of maintaining a decent standard of living.

1974

My name is Eisaku Sato. The first Asian winner of the Nobel Prize, I served Japan as prime minister for many years. In that position, I based my policies on the 1947 Japanese constitution, which renounced war. I worked to improve relations with other Asian nations, increase aid to Third World countries, and generally develop greater international cooperation. In my speech accepting the 1974 prize, I pointed out that peace is closely linked to the daily lives of all people. Peace "allows each individual and his family to pursue, without fear, the purpose of their lives."

I, Sean MacBride, shared the 1974 award with Prime Minister Sato. I was an Irish journalist, lawyer, and politician. I worked for peace in many ways but am perhaps best known as the longtime president of the International Board of Amnesty International, an organization that investigates and works to end torture. I have traveled the world over to argue the views of Amnesty International. In my address, I stressed the importance of informed public opinion, saying "Now, because the public can learn and see what its government is doing, it is able to curb the government."

1975

My name is Andrei Sakharov. I am a Soviet physicist. As a young man, I worked on the development of Soviet nuclear weapons. But in 1968, I came to believe that nuclear weapons threatened the world and that their development should be stopped. I spoke out on these views and my belief that the Soviets and Americans must learn to cooperate. I also began working for human rights in the Soviet Union. When it was announced that I had won the 1975 Nobel Peace Prize, the government refused to give me a passport to go to Oslo to accept the prize. My wife, who was out of the country to receive specialized medical care, accepted the prize and spoke on my behalf, saying "I am convinced that international confidence, mutual understanding, disarmament and international security are inconceivable without an open society with freedom of information, freedom of conscience, the right to publish, and the right to travel and choose the country in which one wants to live."

1976

I am Mairead Corrigan. With Betty Williams, I won the 1976 Nobel Peace Prize. We were recognized for starting the Community for Peace People, an interfaith organization dedicated to ending conflict between Catholics and Protestants in Northern Ireland. I was moved to action when I saw an IRA terrorist shot by British troops; the car he was driving went out of control and killed my sister's three children. Our organization supported the idea that if Protestants and Catholics could live in the same neighborhoods, go to the same schools, and play in the same parks, they would come to trust each other and live in peace.

1978

My name is Anwar el-Sadat. I was the president of Egypt from 1970 to 1981. After the Arab-Israeli War in 1973, I worked hard to bring peace to the Middle East. In 1977, I traveled to Israel to present my peace plan to the Israeli Knisset (Parliament). Although many other Arab leaders opposed my activities, Prime Minister Menachem Begin of Israel worked with me in negotiating for peace. Begin and I shared the 1978 Nobel Peace Prize.

1983

I am Lech Walesa, leader of Communist Poland's first independent labor union, Solidarity. I won the 1983 Nobel Peace Prize for my efforts to force the Polish government to give workers more freedom. Because of my efforts, I was detained by the government for nearly a year. As a result of this earlier detainment and the Polish government's anger when I was awarded the Nobel prize, I decided not to travel to Oslo to receive the award. I was afraid the Polish government would not let me return.

1984

My name is Desmond Tutu. I am an Anglican bishop in Johannesburg, South Africa. I won the 1984 Nobel Peace Prize for my efforts to end apartheid. I have encouraged the use of nonviolent protests and have asked other countries to put economic pressure on South Africa until it ends its policies of racial oppression.

1988

I represent the 10,500 United Nations peacekeeping soldiers, who received the 1988 Nobel Peace Prize. I also represent the 733 soldiers who have died in UN peacekeeping missions. My award was accepted by the secretary-general of the UN, Javier Perez de Cuellar, who said that the use of UN forces to separate warring parties, monitor truces, and oversee elections was the first time in history that "military forces have been employed internationally not to wage war, not to establish domination, and not to serve the interests of any power or group of powers." Although Perez de Cuellar spoke of a time of "hope and promise" for the UN, he warned that the peacekeeping operations were in jeopardy because member nations, including the United States, were failing to pay their share of the cost.

1990

My name is Mikhail Gorbachev. During the 1980s, I led the Soviet Union to greater openness, which I called *perestroika*. I won the Nobel Peace Prize in 1990 for promoting this openness, helping end the Cold War, and allowing the eastern European nations greater independence, actions that the Nobel Committee said helped promote international trust. I was unable to go to Oslo to accept the award because of troubles in my own country. In fact, my popularity at home was very low because of economic problems and ethnic unrest. In my acceptance speech, which I finally made in June of 1991, I asked the world to help the Soviet Union in its efforts to change.

1991

I am Aung San Suu Kyi, a leader of the group opposing the military government of Myanmar (formerly Burma). The Nobel Committee honored me for my "nonviolent struggle for democracy and human rights." They said the prize was intended to show their "support for the many people throughout the world who are striving to attain democracy, human rights, and ethnic conciliation." Unfortunately, they were unable to reach me to tell me I had won the prize because I was under house arrest.

1993

My name is Nelson Mandela. I spent 27 years in prison because of actions I took as leader of the African National Congress. The ANC tried to win rights for black South Africans. I won the Nobel Peace Prize with someone who I once considered an enemy—the leader of the South African government, F.W. De Klerk. We won the prize for our efforts to end apartheid and create a democracy in which all South Africans could participate. Although we are still political rivals, both of us realize that all South Africans must work together peacefully for democracy, human rights, and an end to hunger, poverty, ignorance, and civil war.

27. HUMANKIND'S BETTER MOMENTS

Introduction:

In 1988, *Time* magazine replaced its usual "Man of the Year" citation with a "Planet of the Year" award to earth, citing the critical nature of the problem humans face if they wish to save their planet. In light of such urgency, it is not surprising that a great many global studies lessons deal with issues and problems. However, students and teachers alike may find it refreshing to focus on some of, as historian Barbara Tuchman calls them, humankind's "better moments." That is the focus of this lesson, which can be carried out over a course of several weeks. If the primary subject of your social studies course is world history, this might even be an ongoing project throughout the year or a culminating project for year's end.

Objectives: Students will be able to:

1. List several achievements a noted historian views as humankind's "better moments."
2. Through research, identify achievements they personally view as reflective of the best in humans.

Time Required: 1-2 class periods plus research and preparation time (in or out of class)

Materials and Preparation: You will need copies of Handouts 27-1 and 27-2 for all students.

Procedure:

1. Remind students of some of the problems people and earth face. Do students feel optimistic or pessimistic about people's ability to solve these problems? Why do they feel this way? What have they learned that contributes to their views?
2. Read the following quotation by prize-winning historian and author Barbara W. Tuchman: "In this troubled world of ours, pessimism seems to have won the day. But we would do well to recall some of the positive and even admirable capacities of the human race.... Amid a mass of worldwide troubles and a poor record for the 20th century, we see our species—with cause—as functioning very badly... A study of history reminds one that mankind has its ups and downs and during the ups has accomplished many brave and beautiful things...." Allow time for students to share their reactions to this statement.
3. Distribute Handout 27-1, explaining that it describes some of the achievements Tuchman identified as being among humankind's "better moments." Allow time for students to read the handout; then conduct a class discussion of the items mentioned.

Activity developed by Laurel R. Singleton. Handout based on "Mankind's Better Moments," Barbara W. Tuchman, *Los Angeles Times* (April 27, 1980).

4. Distribute Handout 27-2, going over the instructions with students and explaining the timeframe in which students will be expected to complete the assignment. Encourage students to be creative in determining how to present their work.

5. When the assignment is due, allow one or two class periods for students to share the results of their research.

Follow-up:

Students could create a bulletin board display or an assembly presentation to share the results of their research on "humankind's better moments" with the rest of the school.

SOME "BETTER MOMENTS" IN HISTORY

Historian Barbara W. Tuchman has received many awards for her research and writing. The following are some of the "better moments" of humankind that she identified in an article written in 1980.

The Gothic Cathedrals

In the Middle Ages, many beautiful cathedrals were built in Europe. The building of these cathedrals required development of new building and architectural techniques, as well as the willingness of all members of a community—the rich and the poor—to help build these huge structures.

The Exploration of the New World

People came to the New World for many reasons—to seek wealth and power for themselves and their countries, to gain religious freedom. But no matter what their reasons, the explorers faced incredible hardships and unknown difficulties. Their presistence showed, as Tuchman put it, "sheer grit."

Humans' Pleasures and Art

People have developed many ways to amuse themselves—"pageants, carnivals, festivals, fireworks, music, dancing and drama, parties and picnics, sports and games, the comic spirit and its gift of laughter." All of these reflect a better side of people. But most important, says Tuchman, is art—music, architecture, literature, painting, sculpture. All art, she says, "opens our eyes and ears and feelings to something beyond ourselves, something we cannot experience without the artist's vision and the genius of his craft."

The Love of Liberty

Tuchman believes that the strongest impulse among people is the "zeal for liberty," the love of freedom. This impulse has caused people throughout history and around the world to rise up against conquerors, dictators, and other corrupt leaders. Tuchman believes such rebellions will continue "until the day power ceases to corrupt."

RESEARCHING HUMANKIND'S "BETTER MOMENTS"

Your assignment is to identify a person, event, movement, or object that represents one of humankind's "better moments" to you personally. You may choose a person whose life or work represents values for which you believe humans should strive. You may pick an event or movement that represents values you believe are important to the future of our planet. You may choose several pieces of art that represent the quest for meaning and beauty as you see it.

There are only three requirements for your selection:

1. It must represent your personal values.
2. It must have occurred before the 20th century.
3. It must have occurred outside the United States.

The last two requirements are not meant to suggest that there have been no "better moments" in the United States or in the 20th century. In fact, once you have selected one person, event, or object from an earlier time period somewhere else in the world, you may select a second 20th-century or U.S. example.

Find out as much as you can about the "better moment" you select. Plan a presentation to share the results of your research with the class. Be as creative as you can in planning your presentation. Your presentation can be in the form of a painting, a drama, an essay, or any other form that explains the importance of the item you selected and the values it represents.

ADDITIONAL RESOURCES FOR TEACHERS

The lists below suggest the variety of resources available in the area of global studies and the range of organizations and projects with interests in the area. Many of the materials listed contain bibliographies of additional materials, and all of the organizations can provide more information about specific or general topics related to the field. These lists are provided simply as starting points for developing your own resource collection on global studies.

Materials

Balance of the Planet: School Edition (Culver City, CA: Social Studies School Service, 1990).

This computer program shows the interdependence of industry and the environment through a role-playing activity. Available for IBM and Macintosh.

Challenge Around the World (Carthage, IL: Good Apple, 1991).

This board game contains 1,440 questions that will help students learn factual information about the countries of the world. The game board, a world map, also encourages students to learn basic geographic information.

Chase's Annual Events: The Day by Day Directory (Chicago: Contemporary Books, annual).

This publication covers holidays, holy days, national and ethnic days, seasons, astronomical phenomena, festivals and fairs, anniversaries, birthdays, special events and traditional observances of all kinds, the world over. Little else need be said about the contents of this information-filled resource.

Earthalert: The Active Environmental Game (Culver City, CA: Social Studies School Service, 1990).

This board game for three to six players draws upon student knowledge of recycling, tropical rainforests, global warming, and other topics to illustrate how personal action can make a difference.

Earth Matters: Studies for Our Global Future, by Pamela Wasserman and Andrea Doyle (Washington, DC: Zero Population Growth, 1991).

This resource contains 32 activities to help students examine the connections between population growth and the health and well-being of people and our planet.

Earth Treks (Culver City, CA: Social Studies School Service, 1990).

Appropriate for grades 4 and up, this computer program contains samples of languages and music from several countries; databases on earth and environmental issues; and interactive games. Available for Macintosh only.

Earth Watch for a Cleaner and Safer Environment (Culver City, CA: Social Studies School Service, 1993).

This book provides 27 newspaper-based lessons on such environmental issues as air pollution, the greenhouse effect, deforestation, and endangered species.

Ethnic Celebrations Around the World (Carthage, IL: Good Apple, 1991).

This book for teachers in grades 3-8 provides activities for studying 100 historic and modern festivals from 16 countries. Comparisons are made between festivals that reflect similar concerns or values; for example, China's Chi Hsi Festival is compared to Valentine's Day. Many craft, cooking, and art projects are included.

Faces: The Magazine About People (Peterborough, NH: Cobblestone Publishing, nine times yearly).

This magazine for children focuses on lifestyles, beliefs, and customs found throughout the world. It also explores problems faced by people in various cultures. Each issue includes articles, stories, and activities focused on such themes as ancestors, ancient Mexico, children's health, cloth, desert life, storytelling, and Haitians.

Folktales Audiotapes: Teaching Reading Through Visualization and Drawing, by Laura Rose (Tucson, AZ: Zephyr Press, 1993).

This audiotape presents two traditional folktales, each featuring singing and musical instruments from the country of origin. Among the cultures represented are Russia, Japan, Denmark, West Africa, and the Ojibway. All the stories have been selected to include predictability and repetition to encourage involvement and memorization; all are nonviolent.

Gaia: An Atlas of Planet Management, edited by Norman Myers (New York: Anchor, 1993).

This colorful and information-packed atlas is divided into seven sections: land, ocean, evolution, humankind, civilization, and management. Contributors include scientists and indigenous peoples.

Global Geography: Activities for Teaching the Five Themes of Geography in Grades 3-9, developed by the Massachusetts Geography Alliance (Boulder, CO: Social Science Education Consortium, 1990).

This teacher resource presents 27 activities for teaching the five themes of geography in a global context. Following two introductory activities, the book presents five lessons on each theme: location, place, relationships within places, movement, and regions. Numerous student handouts are provided.

Global Education: From Thought to Action, edited by Kenneth A. Tye (Alexandria, VA: Association for Supervision and Curriculum Development, 1992).

This 1991 ASCD yearbook presents rationales for global education along with a series of articles on practices in the field. The articles deal with such topics as teacher development and global education, global education partnerships between schools and universities, and school-community partnerships in global education programs.

Global Education: School-Based Strategies, edited by Kenneth A. Tye (Orange, CA: Interdependence Press, 1990).

This book presents case studies on ten individual school global education projects that can serve as models for other schools interested in implementing global education programs or curricula.

Global Primer: Skills for a Changing World, by H. Thomas Collins and Fred Czarra (Denver, CO: Center for Teaching International Relations, 1991).

This book offers a variety of high-interest global studies learning activities especially designed to develop elementary students' skills. The lessons can be used in social studies, math, science, or language arts classes. They are grouped into four categories: "World Basics," "World Awareness," "World Communications," and "Map and Globe Skills."

Individual Rights in International Perspective: Lessons on Canada, Mexico, Japan, and Nigeria, by Barbara Miller, Lynn Parisi, and others (Boulder, CO: Social Science Education Consortium, 1992).

Four units comprise this resource, with each unit focusing on individual rights in one of the countries named in the title. Connections with the U.S. Bill of Rights are made in each unit.

International Inspirer 2.0 (Watertown, MA: Tom Snyder, 1993).

This computer program guides the class as they plan a trip around the world to collect important commodities. The activity, intended for students in grades 5-12, develops research and map-reading skills. Available for Apple, Macintosh, and IBM.

Laughing Together: Giggles and Grins from Around the Globe, compiled by Barbara K. Walker (Minneapolis, MN: Free Spirit, 1992).

This book contains jokes, cartoons, funny stories, humorous poems, riddles, and one-liners from around the world; many of the jokes are provided in the original language, along with English. In addition to amusing students in grades 4-8, the book should help them appreciate the role of humor in human experience.

Living in a Global Age (Stanford, CA: SPICE Program, 1992).

This simulation involves students in exploring issues of global trade and interdependence. From 12 to 30 students in grades 5-12 can participate.

Making a World of Difference: Creative Activities for Global Learning, developed by the Office on Global Education, National Council of Churches (Denver, CO: Center for Teaching International Relations, 1989).

This resource contains activities designed to develop a global perspective. Many of the activities link the local and the global. The book can be used with all ages and with community groups.

New Global Resource Book, The (New York: American Forum, 1992-93).

This resource lists 172 organizations, associations, or projects that provide materials or services related to global education. The listings are extensively annotated, and the book is well indexed to make finding relevant resources easy.

One World: Countries Database (Culver City, CA: Social Studies School Service, 1987).

This computer data base—available in a variety of Apple, Commodore, and IBM versions—contains information on 178 nations. The data base covers information in 33 geographical, economic, and demographic categories and can be searched using multiple criteria.

Our Only Earth: A Curriculum for Global Problem Solving, by Micki McKisson and Linda MacRae-Campbell (Tucson, AZ: Zephyr Press, 1990).

This series of seven non-sequential units for students in grades 4-12 covers such topics as war, poverty, energy, and the future of the rainforests.

Peopling of Planet Earth, The: Human Population Growth Through the Ages, by Roy A. Gallant (New York: Macmillan, 1990).

This thought-provoking book for students in grades 4-8 looks at the impact of population growth from earliest days to the present.

Protecting Our World (Culver City, CA: Social Studies School Service, 1991).

This three-book series was developed by the British publisher Usburne. Each book focuses on protection of a particular aspect of the environment—endangered species, trees and forests, and rivers and seas. The books suggest ways that readers can help solve environmental problems.

"Simulations for a Global Perspective," *Intercom* No. 107 (New York: American Forum, 1985).

This issue of the global studies periodical *Intercom* brings together games that appeared in previous numbers (many now out of print). The games focus on such areas as cooperation, conflict resolution, international law, the environment, and energy.

Skipping Stones: A Multicultural Children's Quarterly (Eugene, OR: Skipping Stones, quarterly).

Skipping Stones is a magazine for teachers and students to read together. Each issue has a theme topic or culture; for example, recent issues focused on "The Land and People of the Soviet Republics" and "Women of Many Ages and Places." Included are poetry, articles, photographs, maps, activities, recipes, and reader contributions.

State of the World, The, by Lester R. Brown and others (Washington, DC: Worldwatch Institute, annual).

The Worldwatch Institute annually publishes this report on the world's resources and how they are being used. While not suitable for use by elementary students, the book provides valuable information for teachers.

Teaching About Cultural Awareness, by Gary Smith and George Otero (Denver, CO: Center for Teaching International Relations, 1989).

The general goals of the activities in this book are to increase awareness of cultural differences, to help students become aware of the diversity of ideas and practices found in human societies, to help them compare these ideas and practices, and to encourage student recognition of their own cultural perspectives. The lessons are suitable for students in grades 4 and above.

Teaching About Food and Hunger (Denver, CO: Center for Teaching International Relations, 1989).

Designed for students in grades 6-12, these activities look at both personal nutrition and world hunger topics.

Teaching About Global Awareness with Simulations and Games, by Steven L. Lamy and others (Denver, CO: Center for Teaching International Relations, 1991).

Simulations in this collection cover four global themes: development and technology, human rights, basic human needs, and inequality. Simulations are designed for students in grades 7 and up.

Teaching About Global Issues: Population, Health, Hunger, Culture, and Environment, by Hazel Sara Greenberg (New York: American Forum, 1993).

This collection of 12 lesson plans focuses on such topics as population, health, hunger, and the environment.

Teaching Reading in the Social Studies: A Global Approach for Grades K-5, by Colleen M. Rickert and Mary Gold (Denver, CO: Center for Teaching International Relations, 1990).

This resource provides activities for teaching global studies and reading skills simultaneously. The three sections of the book—"Our World," "Our Expanding World," and "Variety of Cultures"—emphasize vocabulary development, reading comprehension, and reading study skills.

Teaching the Music of Six Different Cultures, by Luvenia A. George (Danbury, CT: World Music Press, 1987).

This guide contains lesson plans and resource lists for introducing students to African, Black American, Native American, Hawaian, Jewish, Mexican, and Puerto Rican cultures through music.

Threatened Cultures: World Issues, by Virigina Luling (Vero Beach, FL: Rourke, 1990).

This book for students in grades 5 and up investigates endangered cultures around the world.

Why Do You Speak as You Do? (New York: Walker, 1992).

This book for students in grades 4-8 explores the origins and development of languages, as well as how all people learn to speak.

Worldways: Bringing the World into the Classroom, by Pamela Elder and Mary Ann Carr (Menlo Park, CA: Addison-Wesley, 1987).

This teacher resource book provides a "broad-based rationale for teaching with a global perspective," supported by 76 activities and an extensive resource section. The wide-ranging topics of the activities may be used in language arts, social studies, math, science, art, home economics, and physical education. The teaching strategies are also varied.

Organizations

American Committee for International Conservation
Center for Marine Conservation
1725 DeSales Street, NW, Suite 500
Washington, DC 20036

American Forum for Global Education
45 John Street, Suite 908
New York, NY 10038

Asia Society
725 Park Avenue
New York, NY 10021

Center for Teaching International Relations
University of Denver
Ben M. Cherrington Hall, Room 208
Denver, CO 80208

Center for World Education
College of Education and Social Services
University of Vermont
Burlington, VT 05405

Educators for Social Responsibility
23 Garden Street
Cambridge, MA 02138

ERIC Clearinghouse for Social Studies/Social Science Education
Indiana University
2805 East 10th Street
Bloomington, IN 47405

Foreign Policy Association
205 Lexington Avenue
New York, NY 10016

Global Education Office
Boston World Affairs Council
22 Betterymarch Street
Boston, MA 02109

Global Learning
1018 Stuyvesant Avenue
Union, NJ 07083-6023

International Center for Development Policy
731 8th Street, SE
Washington, DC 20003

International Food Policy Research Institute
1776 Massachusetts Avenue, NW
Washington, DC 20036

Links
Elliott School of International Affairs
George Washington University
Washington, DC 20052

Massachusetts Global Education Project
Winchester Public Schools
154 Horn Pond Brook Road
Winchester, MA 01890

Mershon Center
Ohio State University
199 West 10th Avenue
Columbus, OH 43201

Middle East Outreach Council
Dr. Kent Kimble
University of Utah
Middle East Center, Building #113
Salt Lake City, UT 84112

National Committee for World Food Day
1001 22nd Street, NW
Washington, DC 20437

National Council for the Social Studies
3501 Newark Street, NW
Washington, DC 20016

National Geographic Society
17th and M Streets, NW
Washington, DC 20036

Organization for Economic Cooperation and Development
1750 Pennsylvania Avenue, NW
Washington, DC 20006

Oxfam America
115 Broadway
Boston, MA 02116

People-to-People International
501 E. Armour Boulevard
Kansas City, MO 64109

Population Reference Bureau
1875 Connecticut Avenue, Suite 520
Washington, DC 20009-5728

Population Resource Center
500 East 62nd Street
New York, NY 10021

Rainforest Action Network
466 Green Street
San Francisco, CA 94133

Reach Center for Multicultural and Global Education
239 North McLeod
Arlington, WA 98223

Social Science Education Consortium
3300 Mitchell Lane, Suite 240
Boulder, CO 80301-2296

Stanford Program on International and Cross-Cultural Education
Stanford University
Littlefield Center, Room 300
Lausen Street
Stanford, CA 94305

Student Letter Exchange
63 Third Avenue
New York, NY 10017

UNICEF
866 United Nations Plaza
New York, NY 10017

United Nations Association of the USA
485 Fifth Avenue
New York, NY 10017-6104

U.S. Association for the Club of Rome
555 NE 15th Street, Penthouse H
Miami, FL 33132

World Affairs Council of Philadelphia
1314 Chestnut Street
Philadelphia, PA 19107

World Population Society
133 H Street, NW, Suite 760
Washington, DC 20005

World Resources Institute
1709 New York Avenue, NW, Suite 700
Washington, DC 20005

Worldwatch Institute
1776 Massachusetts Avenue, NW
Washington, DC 20036

World Wildlife Fund
1255 23rd Street, NW
Washington, DC 20009

World Wise Schools
Peace Corps of the United States
1990 K Street, Suite 7617
Washington, DC 20526